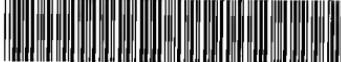


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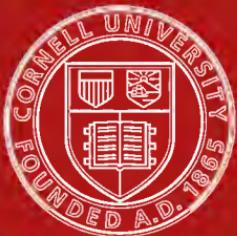
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IN THE
Circuit Court of the United States
For the Eastern Division of the Eastern
Judicial District of Missouri.

UNITED STATES OF AMERICA,

Petitioner,
vs.

STANDARD OIL COMPANY (NEW JERSEY) ET AL.,
Defendants.

BRIEF FOR DEFENDANTS ON THE FACTS.

VOLUME I.

HISTORICAL STATEMENT—PIPE LINES—COMPETITORS.

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TABLE OF CONTENTS.

VOLUME I.

CHAPTER I.

STANDARD OIL COMPANIES To-DAY.

STANDARD OIL COMPANY (NEW JERSEY) :

	PAGE
Refineries owned and operated by Standard Oil Companies-----	1-2
Crude oil supply -----	2
Marketing of products -----	2
Plants owned by Standard Oil Co. (New Jersey)-----	3
Important companies whose stock is owned by Standard Oil Co. (New Jersey) and properties owned by them-----	3-4
Companies having minority stockholders -----	5
Companies no longer in existence-----	6
Companies in which Standard Oil Co. is a minority stockholder -----	6
Natural gas companies -----	7
Companies in which Standard Oil Co. has no interest -----	7
Other companies -----	8

CHAPTER II.

ORIGIN, DEVELOPMENT AND OWNERSHIP OF THE STANDARD OIL BUSINESS AND PROPERTIES.

EARLY CONDITIONS IN OIL INDUSTRY :

Crude supply -----	9
Hazardous business-----	10-3
Business speculative-----	13
Early transportation-----	13-4
Price fluctuations-----	14-5

Table of Contents.

Vol. I
Page

Refineries prior to 1870 :	
Very prosperous at first-----	16
Overconstruction; decline in profits-----	16-8
RISE AND DEVELOPMENT OF STANDARD OIL BUSINESS DOWN	
TO TRUST AGREEMENT OF 1882 :	
Beginning of Standard Oil business-----	19
Elements of stability-----	20-1
Organization of S. O. Co. (of Ohio) -----	22
Acquisition of Cleveland refineries-----	22-4
Acquisition down to 1875-----	24-9
Early pipe lines :	
First acquisition of pipe lines by S. O. interests-----	30
Reason for acquisition; development of system-----	30-2
Empire Transportation Company :	
Purchase of refineries and pipe lines of-----	32-3
(See also pp. 32, 139-40)	
Refineries purchased after 1875-----	33-4
Organization and extension of marketing business	
after 1875 -----	35-6
Lubricating plants-----	36-8
Marketing facilities for lubricating oil-----	38
Miscellaneous acquisitions-----	39
Acquisitions only incident to expansion as a whole-----	39-40
OWNERSHIP OF STANDARD OIL PROPERTIES PRIOR TO TRUST AGREEMENT:	
How paid for : -----	41-2, 49
How held :	
Properties conveyed direct to Standard Oil Co.	
(of Ohio)-----	41-2
Other properties :	
How held in general-----	41
Prior to April 8, 1879 -----	42-5
From April 8, 1879, to Trust Agreement-----	49-50, 53-6
All important properties owned at time of Trust	
Agreement already acquired April 8, 1879-----	46
Vilas, Keith and Chester Agreement of April 8,	
1879 -----	49-51
Purposes of-----	52
Period covered by Vilas, Keith and Chester Agree-	
ment-----	53-6

Table of Contents.

Vol. I
Page

TRUST AGREEMENT of 1882:

Purposes of	56-7
ALL ESSENTIAL FACTORS OF STANDARD OIL BUSINESS HAVE RESULTED FROM ACQUISITIONS ALREADY OWNED BY STANDARD OIL CO. (OF OHIO) AT TIME OF TRUST AGREEMENT OF 1882:	
Refineries	58-60
Pipe Lines.....	60-1
Marketing business.....	61-2
ALL IMPORTANT COMPANIES NOW OWNED EITHER AMONG COMPANIES NAMED IN TRUST AGREEMENT OR SUBSEQUENTLY ORGANIZED BY STANDARD OIL COMPANIES:	
Companies formed out of properties of S. O. Co. (of Ohio)	62-4
S. O. Co. (N. J.); S. O. Co. of N. Y.....	63-4
Other companies.....	64
Companies organized by Standard Oil Trustees which constructed their own plants.....	65-7
Refining companies.....	65
Pipe line companies.....	65-6
Other companies.....	66-7
Properties of existing companies derived from companies named in Trust Agreement or organized by Standard Oil Trustees.....	67-8
PROPERTIES OWNED BY STANDARD OIL TRUSTEES AT TIME OF SHERMAN ACT SUBSTANTIALLY IDENTICAL WITH PROPERTIES NOW OWNED BY STANDARD OIL COMPANY (N. J.)	
69-75	
ISSUES OF TRUST CERTIFICATES	
75	
COMMON OWNERSHIP NOT AFFECTED BY DISSOLUTION OF THE TRUST	
75-83	
Companies liquidated at time of dissolution of Trust.....	76-7
Stocks transferred to S. O. Co. (N. J.) at time of dissolution of Trust	77
The 20 companies whose stocks were distributed by the Trustees	77-8
Distribution of stocks of 20 companies.....	78-9
Proportional interest not affected.....	79
Stocks of separate companies had no recognized value and were not dealt in	79-82
Management of companies not changed.....	82
Proportionate ownership of each stockholder in each of 20 companies at all times the same.....	82-3

Table of Contents.

Vol. I
Page

ACQUISITION OF ALL STOCKS BY THE STANDARD OIL COMPANY (OF NEW JERSEY) -----	83-4
The proportional interest of each shareholder in S. O. Co. (N. J.) the same as his interest theretofore in each of the 20 companies -----	83-5
CONTINUITY OF INTEREST FROM ORIGIN OF STANDARD OIL BUSINESS UNTIL PRESENT TIME-----	85
CHIEF FACTORS OF SUCCESS OF STANDARD OIL BUSINESS-----	86-112
Abundant capital-----	86-7
Readiness to make needed investments-----	87
Securing crude oil supply :	
Difficulties of insuring supply of crude oil-----	89-6
Conditions creating difficulty-----	91-3
Hazards of pipe line construction-----	93-4
Risk and expense of carrying crude oil in storage -----	95-6
Solution of difficulty by S. O. Co.; construction of pipe lines and storage of oil-----	95-9
Judicious location of refineries-----	99-102
Development of marketing system-----	102-3
Development of export business-----	104
Success in refining refractory oils :	
Lima crude oil and the Frasch process-----	104-6
California oil and Starke process-----	106-9
Improvement of refining processes ; development of by-products and introduction into general use-----	109-11
Economical and efficient conduct of business-----	111-2
Judgment of future conditions generally justified by results -----	112

CHAPTER III.**EARLY CONTRACTS.**

BUSINESS NOT CREATED FOR IMPROPER PURPOSES OR DE- VELOPED BY IMPROPER MEANS -----	113
REFINERIES NOT DRIVEN OUT OF BUSINESS OR PIPE LINES ACQUIRED THROUGH RAILROAD REBATES OR DISCRIMINA- TIONS -----	114-143
South Improvement Company-----	115-9

Table of Contents.	Vol. I
	Page
Pooling Agreement of 1874.....	119-122
Terminal agreements.....	122-6
Rebates and Concessions.....	127-138
Universal practice to give rebates prior to Inter-state Commerce Act.....	127-131
No proof of rebates or concessions to Standard Oil prior to 1875 or after 1880.....	131
No proof of rebates or concessions prior to 1877 except terminal agreement with New York Central in 1875	132
Empire Transportation Company controversy; no proof of discrimination in favor of Standard.....	132-4
(See also 32, 139-140.)	
Agreement with Pennsylvania Railroad of October 1877.....	134-8
Commission allowed not more than fair compensation for service.....	134-8
Additional rebates or concessions allowed Standard were allowed equally to other shippers.....	137
No competitive refiners were driven out of business or handicapped by concessions..	138
Allowance to American Transfer Company a pro-rating arrangement between carriers.....	139-143
Not connected with acquisition of Empire Transportation Company pipe lines	139-40
No indication of intent to injure business of competitors	141
It did not injure competitors.....	141-3
PROPERTIES ACQUIRED WERE PURCHASED FOR LEGITIMATE BUSINESS REASONS.....	143-6
Disposition of refineries acquired	144-6
NO CONTRACTS WITH SELLERS OF PROPERTIES RESTRAINING THEM FROM RE-ENTERING BUSINESS.....	147-9
NO DISMANTLING OF REFINERIES TO DIMINISH REFINING CAPACITY	149
NO TRANSACTIONS SHOWING DESIGN TO LIMIT BY CONTRACT OPERATIONS OF COMPETITORS:	150-1
The Petroleum Refiners' Association of 1872	151

Table of Contents.

Vol. I
Page

NO REFINERS DRIVEN OUT OF BUSINESS BY STANDARD OIL COMPANIES AND NO REFINERIES ACQUIRED BY UNFAIR METHODS-----	151-3
THE TIDEWATER COMPANIES:	
Relations with, prior to contract of 1883-----	153-4
Contracts of 1883-----	154-6
Termination of contracts, of 1883 in 1890-----	154
Ownership of stock in Tidewater Companies-----	154
Present relations with Tidewater Companies-----	155-6
CONTRACT OF 1884 BETWEEN PENNSYLVANIA RAILROAD AND NATIONAL TRANSIT COMPANY-----	160-2

CHAPTER IV.**PIPE LINES.****PIPE LINES.**

Legal status-----	163
Private lines-----	163
Other lines-----	164

GENERAL DESCRIPTION.

Gathering lines-----	165
Crude oil purchases-----	166
Crude oil prices-----	169

INDEPENDENT REFINERS, SALES TO-----

Trunk lines-----	176
------------------	-----

RATES-----

Not discriminatory-----	178
Not unreasonable-----	178

FACILITIES FOR INDEPENDENT SHIPPERS-----

TARIFFS.	178
----------	-----

Companies which have filed tariffs-----	182
Conditions as to quantity not unreasonable -----	185
Conditions same for independent shippers as for Standard Oil shippers-----	187

MINIMUM SHIPMENTS IN TARIFFS.

Amounts fixed in good faith-----	189
Amounts same as for Standard Oil shippers-----	189
Independent shippers may send fractional parts of minimum shipments by uniting with Standard Oil shippers-----	189

Table of Contents.	Vol. I Page
CONTAMINATION OR MIXTURE IN PIPE LINES	194
Causes of mixture-----	194
Gravity, what it is-----	196
Viscosity, what it is-----	196
MAKE-UP OF A PIPE LINE	194
PRACTICAL TESTS SHOWING AMOUNT OF MIXTURE	202
CORROBORATION OF TESTS BY RECORDS	207
LOSS OF HIGH GRADE OIL BY MIXTURE	208
COMMON CARRIERS, USE OF PIPE LINES AS COMMERCIALLY IMPRACTICABLE	210
DIFFERING VALUES OF DIFFERENT KINDS OF CRUDE OIL	211
FINANCIAL LOSS NECESSARILY RESULTING FROM MIXTURE	
Amount of-----	211
Too great to be borne by independent shippers-----	211
SUBDIVISION OF PIPE LINES	212
Commercial impracticability-----	212
Results in loss of capacity-----	213
Great cost of new construction to offset loss of capacity -----	214
REBUTTAL	215
U. S. Pipe Line-----	215
Texas Pipe Line-----	218
Experience on these lines no guide-----	219
PREMIUMS	220
OPPOSITION PIPE LINES	
Alleged obstruction to their building-----	222
ACQUISITION OF INTERESTS IN OTHER PIPE LINE COMPANIES	223

CHAPTER V.

ALLEGED CONTRACTS IN RESTRAINT OF TRADE.

CONTRACTS DISCUSSED IN CHAPTER X. OF PETITION HAVE NO BEARING ON CASE-----	225-9
Shut down movement of 1887-----	225
Purchase of oil from Continental Oil Company and Florence Refining Company-----	226
Contracts in California-----	226-9

Table of Contents.

CHAPTER VI.

COMPETITORS.	Vol. I
	Page
COMPETITORS OF STANDARD OIL COMPANY.....	231-242
Competitors at all times.....	231
Competitors always at the chief refining centers	231
Many competitive refineries in operation a great many years.....	232
Competitive refineries in 1895.....	233
Increase in capacity of competitive refineries since 1895 and competitive refineries now in operation..	233
Competitive refiners are doing business on an extensive scale.....	234
Some of them have a number of refining plants..	234
They have gathering lines	235
A number have constructed trunk pipe lines.....	235
They have marketing stations and subsidiary marketing companies.....	235
They export oil and have foreign marketing stations.....	236
They manufacture and market lubricating oil extensively.....	237
Competitive refiners have ample means of trans- portation	237
Oil manufactured by competitors sold everywhere....	237
Proportion of business done by competitors on the increase	238
Competitors business profitable.....	238
The Pure Oil Company.....	239

VOLUME II.**CHAPTER VII.****Railroad Freight Rates.**

	PAGE
GENERAL STATEMENT :	
The Government's contention	243
What constitutes a violation of the Interstate Commerce Law	244
No general conspiracy, as charged	249
Elementary principles of freight rate making	250
Location of refineries	266
OLEAN SHIPMENTS :	
History of rates used	267
26½c. rate relied upon by the Government	271
Meaning of "Not to be posted" on tariffs	283
Blind-Billing	285
Use of Olean-Rochester state rate on shipments to Vermont	287
Rochester-Norwood rate not secret and reasonable	288
Cost of transportation Olean to Burlington reasonable	290
Use of unfiled state tariffs on Interstate shipments	292
Comparison of rates used by Standard and by others to Vermont points	303
Vermont state rates in combination with Interstate rates	310
NEW ENGLAND NON PRO-RATE	312
Government's error as to rates	314
Grand Trunk Tariff A-944	316
Baltimore & Ohio R. R. tariff 4538	331
Donovan Letters	334
Errors in Government Exhibits 621 to 625	335
Mr. Schindler's rate jugglery	339
Government's error as to rates on commodities other than oil	341
Explanation of non-prorate	345
Boltz testimony as to New England rates	346
Fred G. Clarke Co. opinion	348
Westgate freight bills	349

Table of Contents.	Vol. II
	Page
SUPPOSED DISCRIMINATIONS IN CENTRAL STATE	357
Basis of rates in Central Freight Association territory	359
2c. increase of 1900, and comparison of rates from	
Rochester and other shipping points	365
Rates to Detroit and Southern Michigan	367
Tables pp. 158 to 161 of Petition	368
Boltz comparison of oil and sixth class rates	372
SUPPOSED DISCRIMINATION IN SOUTHWESTERN TERRITORY	373
History of rates used to East St. Louis	373
The 18c. rate	375
Chicago Switching District	377
Chicago & Alton application sheets	381
Construction of tariffs by experts :	
Whether 18c. and 6c. rates were reasonable	393
11c. the maximum lawful rate Chicago to E. St. Louis	399
Tariff No. 24 not a legal tariff	401
Low basis of rates on the C. & E. I.	402
Supposed secrecy of 6c. rate	405
Chicago & Alton 10c. rate	410
Waters-Pierce Oil Company matters	412
Shipments from St. Louis to Alexandria	413
Shipments to points beyond Alexandria	418
The 1½c pipe line charge	421
Supposed discrimination in rates from Ohio and Pa. to Southwest	423
SUPPOSED DISCRIMINATIONS IN SOUTHERN STATES	427
The Evansville combination	427
History of 8½c rate	428
11c Chicago-Evansville rate	432
6c Evansville rate	434
Supposed secrecy of 8½c and 6c rates	439
Grand Junction combination	442
The 13c rate	443
Southern Railway rates	448
The Government's contention	449
Were Southern Railway Rate Issues tariffs or Division Sheets ?	451
Blind-Billing under 13c rate	468
Tariffs from Dolton and Riverdale	470
Comparison of rates from Whiting and eastern refining points into the South	472

Table of Contents.

Vol. II

Page

	Page
Comparative shipments from various refineries into the South-----	474
PARKERSBURG-MARIETTA MATTER-----	475
SUPPOSED DISCRIMINATIONS IN CALIFORNIA-----	478
Explanation of overcharge claims paid on California shipments-----	481
ALLEGED DISCRIMINATION IN KANSAS-----	484
Explanation of changes in rates-----	485
Change in arbitrary weights per gallon-----	489
EXPLANATION OF RATES TO UPPER MISSISSIPPI RIVER CROSS- INGS-----	492
EXPLANATION OF RATES TO PACIFIC COAST-----	497
No GENERAL CONSPIRACY SHOWN:-----	501
Standard Officials as Directors of Railroads-----	501
Standard not responsible for supposedly high rates from independent shipping points-----	502
Supposedly low rates used by Standard do not show any conspiracy to secure the same-----	506
The Government's rebuttal-----	508

VOLUME III.**CHAPTER VIII.**

PROFITS AND PRICES.

Profits:

Charges in Petition-----	513
Denials in Answer-----	513
Compound interest calculation-----	515
Exhibits in Corrigan case-----	517
Table of dividends, earnings and assets-----	519
Reasonableness of total net profits-----	519
Profits on refined oil-----	522
Table of total yield and total of refined oil and by-products, with percentages-----	525
Table of marketing profits in 1906 on refined oil and other products-----	527

Table of Contents.

Vol. III
Page

Percentage of refined oil exported -----	528
Table of deductions from "total net profits" -----	528
Table of estimated profits on refined oil, domestic -----	530-1
Increase in by-products, 1906 over 1895-----	532
Table of increased proceeds of by-products -----	533
Increased ratio of profits on by-products -----	533
Naphtha prices-----	534
Average profits per barrel of crude -----	536
 Prices :	
Charges in Petition-----	539
Answer to charges-----	540
Rise in defendants' average prices-----	541
Advance in average prices of all commodities-----	541
Government chart, Defendants' Exhibit 294, showing variations in general prices-----	541
Price charts discussed-----	543
Chart comparing course of average prices of refined oil and of general commodities, and discussion of same-----	544
Charts comparing prices of refined oil with prices of crude-----	555
Decline in purchasing value of money discussed-----	558
Demand and supply discussed-----	567
No limitation of output, facts showing-----	567
Competition makes control of prices impossible-----	569
Variation in prices and margins of profits :	
Small extent of same-----	570
Quantitatively inconsiderable-----	571
Considerable variation inevitable-----	572
Effect of small population on rate of profit -----	574
Variation in rate of profit not unlawful-----	581
Variation in competitors' profits-----	582

Table of Contents.

CHAPTER IX.

ALLEGED UNFAIR METHODS OF COMPETITION.	Vol.
GENERAL STATEMENT	Page
	587
INCOMPETENCY OF TESTIMONY FOR PETITIONER AND FAILURE	
TO PROVE EXHIBITS :	
Competitors as witnesses	588
Ex-employees as witnesses	594
Testimony before Interstate Commerce Commission	597
Failure to prove exhibits	600
Explanation or contradiction of petitioner's incompetent testimony and unproved exhibits	604
LOCAL PRICE CUTTING :	
Pleadings	605
Facts	606
General conclusion from evidence	606
Nature of petitioner's evidence	606
Nature of defendants' evidence	607
Standard's policy and general practice in local price cutting	608
Instances of local price cutting :	
Standard Oil Co. (New Jersey)	612
Standard Oil Co. of New York	614
Standard Oil Co. (Ohio)	618
Standard Oil Co. (Kentucky)	619
No competitor's business destroyed	623
Law Points :	
Point One	624
Point Two	631
REPORTS OF COMPETITORS' SHIPMENTS :	
Pleadings	633
Facts	633
General conclusion from evidence	633
Method of obtaining information	634
Use made of such information	638
Countermand of competitors' orders by means of such information	640
Cutting local prices at destination of competitors' shipments	641

Table of Contents.	Vol. III Page
Cutting prices to consignees of competitive shipments to secure their future trade -----	642
Law Point-----	644
OPERATION OF BOGUS INDEPENDENT COMPANIES :	
Pleadings-----	646
Facts-----	646
Wholesale marketing concerns operated by defendants -----	646
Purchased and operated-----	647
Organized or purchased and operated for special purposes -----	654
General statement -----	658
Retail marketing concerns operated by defendants -----	661
Can Peddling Departments -----	661
Various peddling concerns-----	668
Law Point-----	670
PAYMENT OF REBATES ON OIL PRICES :	
Pleadings -----	675
Facts-----	675
General conclusion from evidence -----	675
S. O. Co. (Indiana) -----	676
S. O. Co. (New Jersey)-----	677
S. O. Co. of New York-----	678
S. O. Co. (Kentucky)-----	679
S. O. Co. (of Ohio) -----	681
Law Point-----	684
MISCELLANEOUS SUBJECTS NOT SPECIFIED IN THE PLEADINGS :	
General Statement-----	686
S. O. Co. (N. J.):	
Giving away oil-----	687
Following competitors' wagons-----	687
S. O. Co. of New York :	
Threat against Hisgen Bros.-----	688
Measuring Hisgen Bros.' barrels-----	689
Giving away oil-----	690
Following competitors' wagons-----	690
S. O. Co. (of Ohio):	
Competition at New London, O.-----	691
Competition at Chardon, O.-----	691

Table of Contents.

Vol. III

Page

S. O. Co. (Indiana) :	
Different brands of oil out of one storage tank	692
Competition at Portland and Saranac, Mich.....	693
S. O. Co. (Kentucky) :	
Purchase of People's Oil Co.....	693
Fraudulent test of competitors' oil.....	694
Contaminating competitors' oil.....	696
Giving away oil.....	696
Oil sold under different brands at different prices	697
Arrangements with merchants for low retail price	697
Employment of peddlers.....	698
Law Points :	
Point One.....	698
Point Two.....	701
INTRAS STATE CHARACTER OF THE BUSINESS.....	703

CHAPTER X.**GALENA-SIGNAL OIL COMPANY.**

SUMMARY OF PLEADINGS	717
FAILURE TO PROVE CHARGES	718
GENERAL STATEMENT	719
REASONS FOR SUCCESS OF GALENA OILS :	
Superiority of oils.....	731
Secret processes.....	731
Meaning of good lubrication.....	733
Superiority of oils as shown by results.....	734
No other oil equally as good.....	735
Improved methods of lubrication due to Galena expert service.....	735
Results of Galena methods.....	738-9
Hot boxes and their elimination.....	739
Statistics showing reduction in number of hot boxes by use of Galena oils and methods.....	742
Saving in repairs due to elimination of hot boxes	743
Saving in oil.....	744

Table of Contents.

	Vol. III Page
Saving in cost of waste.....	745
Saving in coal.....	747
Incentive to railroads to economize where cost is above guaranties	748
Improved discipline.....	749
Railroads could not supervise lubrication as well as Galena Company.....	750
Expert supervision in other branches of railroad operation.....	752
Street railway business.....	753
Foreign railroad business.....	755
GALENA CONTRACT IS ONE FOR LUBRICATION PER UNIT OF SERVICE	756
The contract itself.....	756
Competency of testimony to show construction placed upon it by parties.....	760
Construction of contract by railroad officers	762
Same form of contract used by N. Y. Lubricating Oil Company	764
Operations under N. Y. Lubricating Oil Co. contracts	765
Same form of contract used in other and different lines of businesses	765
REASONS FOR DIFFERENCES IN GUARANTIES :	
Local conditions.....	767
Personal equation	767
Increases or decreases in guarantees because of change in conditions	768
Fluctuations in cost per thousand miles on the same road	769
Differences in guarantees due to historic origin of contracts	770
First guaranties based on prior cost.....	770
Changes in guaranties on each road due to individual conditions	773
Increase of guaranty on Ill. Cent. R. R. 1905.....	776
Increase of guaranty in one class of service sometimes offset by decreases in others	777

Table of Contents.

Vol. III

Page

REASONS FOR DIFFERENCES IN GUARANTIES (Continued) :

Different guaranties on different divisions of same system	777
Averaging of guaranties of all divisions of a system	777
Pennsylvania System	780
First Contracts	781
Original guaranties based on prior cost	781
Average of guaranties not disproportionate	783
Poor results due to wasteful use of oil	783, 786
Value of contracts from advertising standpoint	788

NEW YORK LUBRICATING OIL Co. :

Contracts of N. Y. Lub. O. Co. with	
Georgia Railroad	800
Central of Georgia	801
Louisville & Nashville	801
Poor performance of N. Y. Lub. O. Co. on the L. & N.	802
Good results obtained by Galena oils on L. & N.	802

PRICES OF GALENA OILS :

Other oils as high, or higher, in price	807
Legal right to sell at different prices because oils are made by secret processes	809

SYNOPSIS.**VOLUME I.****CHAPTER I.****Standard Oil Companies To-day.****CHAPTER II.**

	Page
Origin, Development and Ownership of the Standard Oil Business and Properties.	9
FIRST. EARLY CONDITION IN THE OIL INDUSTRY.	9
I. The dependence of the petroleum industry upon a continuous supply of crude oil and the uncertainties as to the supply give a hazardous character to the business which has profoundly affected the whole course of its development.	9
II. The conditions under which the early oil business was carried on necessarily rendered it speculative in the highest degree.	13
III. Prior to 1870 the rush into the business of refining oil had resulted in the erection of refineries with a total capacity far in excess of the amount of crude oil to be refined, and the profits of the business consequently fell off. Many of these refining enterprises lacked all the elements necessary to ensure permanence and stability and could not continue under the new conditions.	15
SECOND THE RISE OF THE STANDARD OIL COMPANY AND THE DEVELOPMENT OF THE STANDARD OIL BUSINESS DOWN TO THE TRUST AGREEMENT OF 1882.	19
I. The Standard Oil business from its inception had elements of permanence, stability and successful development that were generally lacking in the enterprises of that period, and at the time of the organization of the Standard Oil Company of Ohio in 1870, was already the most important single factor in the oil business of the country.	19

Synopsis.	Vol. I
	Page
II. The acquisition by the Standard Oil Company in 1871 and 1872 of various refineries in Cleveland was the natural result of the conditions prevailing in the oil industry.	22
III. The expansion and development of the Standard Oil business subsequent to 1872 followed a natural and logical course. So far as the acquisition of existing plants played a part in such expansion and development, the most important of these had been acquired prior to 1875.	24
IV. Pipe Lines. To insure an adequate and constant supply of crude oil for their refineries, the construction and acquisition of pipe lines by the owners of the Standard Oil business became a matter of necessity. On the other hand, the expense involved in providing an adequate pipe line service to reach and conserve the output of crude oil was such that a very large volume of business was necessary to justify the undertaking.	29
V. The Empire Transportation Company properties. The purchase of the refining interests and the pipe lines of the Empire Transportation Company was necessary to put an end to a ruinous rate war.	32
VI. Other refining interests.	33
A number of refineries were purchased during and subsequent to 1875 for the purpose of establishing the business at new points or enlarging the refining capacity at points where it was already established.	33
VII. Extension of Marketing Business.	35
The Standard Oil marketing business was naturally expanded and developed concurrently with the extension of its refining interests.	35
VIII. Lubricating Oils.	36
The owners of the Standard Oil business in 1877 or 1878 first turned their attention to the making of lubricating oils, and thereafter entered extensively into the lubricating field with the object of utilizing the residuum remaining after the distillation of refined oils from crude petroleum.	36
IX. Marketing facilities for Lubricating Oil.	38

Synopsis.	Vol. I
	Page
The development of the Marketing business for lubricating oil naturally followed the acquisition of interests in the manufacturing end of the business.	38
X. Miscellaneous Acquisitions.	39
Some Miscellaneous Acquisitions were made by the owners of the Standard Oil business prior to 1882 having in view the utilization of the waste products or the effecting of economies in the business, or other purposes having to do with the promotion and welfare of the business.	39
XI. Acquisitions were only incidental to expansion of business as a whole.	39
THIRD. THE OWNERSHIP OF THE STANDARD OIL PROPERTIES DOWN TO THE TIME OF THE TRUST AGREEMENT OF 1882.	41
I. Until the 8th day of April, 1879, all the properties acquired were paid for by the Standard Oil Co. (of Ohio). The properties were either conveyed to the Standard Oil Co. (of Ohio) or the stocks representing them were transferred or issued to individuals to be held by them as trustees for the benefit of the stockholders of the Standard Oil Co. (of Ohio) according to their proportionate interests in that Company.	41
II. Properties held April 8th, 1879.	46
The various properties acquired for account of the stockholders of the Standard Oil Co. prior to April 8, 1879, which were represented on that date either by the stock of the Standard Oil Co. or by stocks and interests held in trust for its stockholders, comprised all the essential factors in the Standard Oil business represented by the stocks and interests named in the trust agreement of 1882.	46
III. The Vilas, Keith & Chester Agreement.	49
On April 8, 1879, all the stockholders of the Standard Oil Co. (of Ohio) and the individuals in whose names the stocks and interests theretofore acquired and held for their benefit stood, and the Standard Oil Co. (of Ohio) itself executed an instrument evidencing the rights of the stockholders of the Standard Oil Co. (of Ohio) to	49

Synopsis.	Vol. I
	Page
said stocks and interests, and transferring the same to Vilas, Keith & Chester for their benefit, and said stocks were transferred on the books of the respective companies to Vilas, Keith & Chester, Trustees.	49
IV. The Period Covered by the Vilas, Keith & Chester Agreement.	53
Acquisitions made subsequent to the Vilas, Keith & Chester Agreement were paid for either by the Standard Oil Company (of Ohio) or by one of the companies whose stocks were held by Vilas, Keith & Chester, and the stocks representing such acquisitions were either transferred to Vilas, Keith & Chester, or put into their custody and were held for the proportionate benefit of the stockholders of the Standard Oil Co. (of Ohio). Various changes in organization were effected for the better systematization of the business, and the business as a whole, represented by the stock of the Standard Oil Co. (of Ohio) and the stocks held by Vilas, Keith & Chester, was managed for the common benefit of its common owners, the stockholders of the Standard Oil Co. (of Ohio).	53
FOURTH. TRUST AGREEMENT OF 1882.	56
The Trust Agreement of 1882 was merely a change in the form in which the common properties represented by the stock of the Standard Oil Co. (of Ohio) and the Vilas, Keith & Chester stocks were held for the common account. The trustees named in the Trust Agreement issued to the holder of each share of the stock of the Standard Oil Co. (of Ohio) twenty trust certificates to represent his interests in the Standard Oil Co. (of Ohio) and in the stocks held by Vilas, Keith & Chester. The Trust Agreement was devised as a simple and effective plan for holding the common properties and furnishing the common owners with suitable evidences of their respective interests.	56
FIFTH. RELATION OF THE BUSINESS AT THE TIME OF THE TRUST AGREEMENT TO THE BUSINESS OF TO-DAY.	58

Synopsis.

Vol. I

Page

The properties already owned by the stockholders of the Standard Oil Co. (of Ohio) in 1882, included substantially all the properties now owned that have not since been originated by the owners of the Standard Oil business. Except as to properties which had then already been acquired, the plant of to-day is almost wholly the creation of the owners of the Standard Oil business.

58

SIXTH. CORPORATE ORGANIZATIONS SINCE THE TRUST AGREEMENT OF 1882.

62

With very few exceptions, all of the companies whose stocks are now owned by the Standard Oil Co. (New Jersey) were either among the companies named in the Trust Agreement of 1882 or have since that time been organized by the Trustees of the Standard Oil Trust, or by one or other of the Standard Oil Companies, and their capital contributed out of the common moneys of the owners of the business. In nearly all cases, the properties held by these Companies were either owned in or prior to 1882 by one or other of the Companies named in the Trust Agreement of 1882 or have since been created by the owners of the Standard Oil Companies. In the most notable instances, the original capital of the companies was paid in moneys and properties which in 1882 belonged to the Standard Oil Co. (of Ohio).

62

SEVENTH. THE PROPERTIES OWNED AT THE TIME OF THE PASSAGE OF THE SHERMAN ACT AND THE PROPERTIES NOW OWNED.

69

At the time of the passage of the Sherman Act all of the essential factors of the Standard Oil businss as it exists to-day were held by the Trustees of the Standard Oil Trust for the common benefit of the holders of the Standard Oil Trust certificates.

69

EIGHTH. ISSUES OF TRUST CERTIFICATES.

The issues of Trust Certificates subsequent to the original issue of seventy million were of small importance so far as the issues in the present case are concerned.

75

**NINTH. DISSOLUTION OF THE TRUST; COMMON OWNERSHIP
NOT AFFECTED.**

75

The ownership of the Standard Oil business and of all its constituent factors has been continuous and was not affected by the dissolution of the Trust in 1892. The stocks of many of the important companies held by the Trustees prior to the dissolution of the Trust passed immediately from them to the Standard Oil Co. (New Jersey) and have since been continuously held by that company. All of the stocks that had been held by the Trustees, or the properties which such stocks represent, were vested in one or other of twenty companies, most of which had been originally organized by the Trustees. The stockholders in each of these twenty companies were identical from the time of the dissolution of the Trust until all of the companies were acquired by the Standard Oil Co. (New Jersey), and each stockholder at all times held the same proportionate interest in each of the twenty companies. The business was a unity and indivisible. It could make no difference whether the interest of a shareholder was represented by one certificate or twenty certificates.

75

TENTH. UPON THE ACQUISITION OF ALL THE STOCKS OF ALL THE COMPANIES BY THE STANDARD OIL COMPANY (NEW JERSEY), EACH SHAREHOLDER IN THE TWENTY COMPANIES BECAME A SHAREHOLDER IN THE STANDARD OIL COMPANY (NEW JERSEY) IN THE SAME PROPORTION IN WHICH HE HAD HELD STOCK IN EACH OF THE TWENTY COMPANIES, OR IN WHICH STOCK THEREIN HAD BEEN HELD FOR HIS ACCOUNT BY THE TRUSTEES.

83

ELEVENTH. NOT ONLY ARE THE OWNERS OF THE STANDARD OIL BUSINESS WHOSE RESPECTIVE INTERESTS ARE NOW REPRESENTED BY THEIR HOLDINGS IN THE STOCK OF THE STANDARD OIL CO. (NEW JERSEY) COLLECTIVELY THE SAME BODY OF MEN WHO HAVE OWNED THE STANDARD OIL BUSINESS FROM ITS INCEPTION, BUT THE GREAT MAJORITY IN INTEREST ARE THE INDIVIDUALS WHO ORIGINATED THE BUSINESS AND THOSE WHO BECAME ASSOCIATED WITH THEM IN THE EARLIER STAGES OF ITS DEVELOPMENT.

85

TWELFTH. THE CHIEF FACTORS IN THE SUCCESS OF THE STANDARD OIL BUSINESS.		86
(a) The owners of the Standard Oil business were the first to adopt the policy of conducting business on an extensive scale with abundant capital, and applied this policy to the conduct of a business in which the conditions peculiarly demanded the employment of abundant capital and extensive operations for its successful development.		86
(b) They have been ready at all times to spend whatever amounts they considered that the prosperity of the business demanded, and have incurred what were apparently great risks, acting on their judgment of the requirements of the industry and belief in the ultimate success of their undertakings.		87
(c) They have recognized the dependence of the petroleum industry on a continued supply of crude oil and the precariousness of the supply from any particular field, and have, regardless of expense, sought to reach, conserve and be in a position to utilize crude oil wherever obtainable.		89
(d) The Standard Oil interests have shown great soundness of judgment in the selection of points at which to establish their refineries and have concentrated their refineries at these points.		99
(e) They have developed their marketing system for the economical distribution of the products of their refineries with results that have fully justified the great expense involved.		102
(f) They have established great foreign marketing companies to enable them to meet the competition of foreign oils and have introduced their marketing system into nearly all foreign countries, and the success of this policy has been such that over 63 per cent. of their illuminating oil is sold abroad.		104
(g) They have made great efforts to solve the problem of refining refractory oils and through the success of these efforts they have been able to utilize to their great advantage oils that otherwise were useless except for fuel purposes.		104

(h) They have been unremitting in their efforts to improve the processes of refining, to diversify the useful by-products to be obtained from the refining of petroleum and to introduce them into general use, and these efforts have resulted to their great advantage as well as to the general benefit of the industry and the public at large. 109

(i) They have, throughout the history of the business, acted upon the principles which were characteristic of the original business of Rockefeller, Flagler & Andrews. They have, wherever practicable, acquired facilities of their own for the transaction of their business, instead of relying upon the use of such facilities from others. They have, as far as practicable, manufactured for their own use everything necessary for the proper conduct of their business. They have in every department of their business and throughout the vast territory in which it is carried on enforced rigid economy and demanded from all their employees the most earnest attention to all details of the business. They have stimulated every employee to conduct his department of the business with the same energy and fidelity as though engaged in a private enterprise of his own. 111

(j) The sagacity with which the business as a whole has been conducted, has been of a very high order; the great apparent risks that have been taken have usually been justified by the existing conditions, and in nearly every case have been justified by the result. 112

CHAPTER III.

Early Contracts.

THERE IS NO EVIDENCE WHATEVER IN THE CASE THAT THE CONSTITUENT FACTORS OF THE STANDARD OIL BUSINESS WERE ACQUIRED OR HELD TOGETHER BY THE COMMON OWNERS FOR THE PURPOSE OF RESTRAINING TRADE OR MONOPOLIZING COMMERCE OR FOR ANY OTHER PURPOSE THAN

THE LEGITIMATE DEVELOPMENT AND PROPER CONDUCT OF THE BUSINESS OWNED IN COMMON. THE CHARGE THAT THE OWNERS OF THE BUSINESS SOUGHT TO KEEP COMPETITORS OUT OF THE FIELD, AND THAT SUCH EFFORTS CONTRIBUTED TO THE ACQUISITION OF CONSTITUENT FACTORS OF THE BUSINESS AND TO ITS GROWTH AND DEVELOPMENT, IS WITHOUT FOUNDATION.

113

FIRST : THE CHARGE THAT PRIOR TO 1882 REFINERIES WERE DRIVEN OUT OF BUSINESS AND REFINERIES AND PIPE LINES ACQUIRED THROUGH RAILROAD REBATES AND DISCRIMINATIONS, IS NOT SUSTAINED, NOR DO THE RAILROAD ARRANGEMENTS CITED IN SUPPORT OF IT EVIDENCE ANY POLICY OR DISPOSITION TO INJURE THE BUSINESS OF COMPETITORS.

114

1. The South Improvement affair has no bearing whatever on the plans and purposes of the stockholders of the Standard Oil Company. The scheme originated with the Pennsylvania Railroad, over which the Standard Oil Company was not a shipper, and with Pittsburg and Philadelphia refiners, who were its competitors. Some of its stockholders subscribed for a minority of the stock of the South Improvement Company as a matter of self protection. They had nothing to do with framing the contracts between the South Improvement Company and the railroads. They were informed that equal rights would be accorded by the Company to the entire trade. They believed the plan impracticable. It was abortive; was never put in operation; affected the rights of no one and was finally and absolutely abandoned.

115

2. The Standard Oil Company was not a party to the Pooling Agreement of 1874 and had nothing to do with bringing about that agreement. The purpose of the agreement was the practical solution of railroad difficulties. The limitation of its benefits to pipe lines maintaining agreed rates of pipeage was necessary to the attainment of its primary object. The claim that it took away the rights of the oil region refiners and that this was done in order to benefit the Standard Oil Company, is wholly unwarranted.

119

3. The arrangements respecting oil terminals were fully warranted by the circumstances. In making such arrangements with the Standard Oil Company the railroads only followed their previous practice. The Standard Oil Company neither sought to obtain nor did obtain any illegitimate advantage through these arrangements.

122

4. The charge that illegitimate advantages over other shippers were obtained by the Standard Oil interests through rebates and rate concessions from railroads and that such rebates and concessions were obtained for the purpose and had the effect of putting competitors at a disadvantage and driving them out of business, is not sustained. Prior to 1875, and subsequent to 1880, the Standard Oil Company received no better rates than were generally accorded to other shippers. In the interval, the concessions in rates obtained were coupled with obligations that fully neutralized any advantage resulting therefrom, or were accorded equally to other shippers. Concessions were not obtained for the purpose of driving competitors out of business ; and no competitors were driven out of business or crippled in their operations by reason of any concessions obtained.

127

5. The allowance made to the American Transfer Company was a temporary arrangement having no relation to the ownership of the latter company by the Standard Oil Company. It was in the nature of a pro-rate paid by one carrier to another carrier, which was in a position to send forward its traffic by any one of several competing lines and claimed special consideration because of its exertions to enlarge the volume of traffic. The object of the American Transfer Company was its own profit. Whether or not the arrangement would now be considered justifiable, it is no evidence whatever of a disposition to injure the business of others for the sake of the incidental benefits that might result therefrom.

139

SECOND. A GENERAL POLICY OR DISPOSITION TO FACILITATE THE EXTENSION OF THE STANDARD OIL BUSINESS BY GETTING RID OF COMPETITORS CANNOT BE INFERRED FROM THE NUMBER OF ACQUISITIONS MADE BY THE STANDARD OIL INTERESTS OR THE DISPOSITIONS MADE OF PROPERTIES PURCHASED. THE PURCHASES AND THE DISPOSITION OF THE PROPERTIES PURCHASED WERE IN ALL CASES BASED ON LEGITIMATE BUSINESS CONSIDERATION. THE SELLERS WERE NOT RESTRAINED FROM RE-ENTERING BUSINESS AND THE REFINING CAPACITY OF THE STANDARD OIL COMPANIES WAS CONTINUALLY INCREASED.

143

(a) The acquisitions of properties and the disposition made of refineries acquired were incidental to the expansion and co-ordination of the Standard Oil business.

143

(b) The Standard Oil Co. has not sought by contract or otherwise to restrain those whose properties it has bought from re-entering the business.

147

(c) The Standard Oil interests have not sought to keep down the refining capacity of the country or the volume of oil to be marketed.

149

THIRD. THERE IS NO PROOF OF A POLICY OR DISPOSITION ON THE PART OF THE STANDARD OIL INTERESTS TO RESTRICT BY CONTRACT THE VOLUME OF TRADE OR THE OPERATIONS OF ITS COMPETITORS.

150

(a) Discussion of contract of 1872 between the Petroleum Refiners' Association and the Petroleum Producers' Association.

150

(b) Remaining transactions are discussed under a subsequent heading of the brief.

151

(c) Tidewater contracts (Exhibit 15, annexed to the Petition).

151

FOURTH. IT IS NOT SHOWN THAT THE STANDARD OIL COMPANIES HAVE EVER DRIVEN A COMPETITIVE REFINER OUT OF BUSINESS, OR PURCHASED HIS REFINERY THROUGH ANY SORT OF COMPULSION.

151

FIFTH. THE RELATIONS BETWEEN THE STANDARD OIL COMPANIES AND THE TIDEWATER COMPANIES DID NOT BEGIN UNTIL NEARLY TWO YEARS AFTER THE TRUST AGREEMENT OF 1882. SO FAR AS SUCH RELATIONS, IF CONTINUED, MIGHT NOW BE OPEN TO CRITICISM, THEY WERE FINALLY TERMINATED JUST AFTER THE PASSAGE OF THE SHERMAN ACT. THE CONTRACTS BETWEEN THE TIDEWATER COMPANIES AND THE STANDARD DO NOT INDICATE THAT THE STANDARD SOUGHT TO EXCLUDE OTHERS FROM THE PETROLEUM INDUSTRY, OR TO RESTRICT THE VOLUME OF TRADE, OR TO DEPRIVE THE PUBLIC OF THE BENEFIT OF COMPETITION. AFTER THE CANCELLATION OF THOSE CONTRACTS IN 1890, THEY HAD NO FURTHER SIGNIFICANCE. THE PRESENT RELATIONS BETWEEN THE COMPANIES ARE NOT OPEN TO CRITICISM.

153

SIXTH. THE AGREEMENTS OF 1884 BETWEEN THE NATIONAL TRANSIT CO. AND THE PENNSYLVANIA RAILROAD CO. (EXHIBIT 14 ANNEXED TO THE BILL) WERE IN ALL RESPECTS REASONABLE AND PROPER CONTRACTS. THEY CEASED TO BE OPERATIVE IN 1893. NO ULTERIOR PURPOSE CAN BE SPELLED OUT FROM THEM, AND THEY ARE UTTERLY IRRELEVANT AS EVIDENCE AGAINST THE DEFENDANTS.

160

CHAPTER IV.

Pipe Lines.

THE CHARGE THAT THE STANDARD OIL COMPANIES MONOPOLIZED THE PETROLEUM CARRYING BUSINESS BY PIPE LINES, AND THROUGH THEIR CONTROL OF THE PIPE LINES HAVE BECOME THE SOLE PURCHASERS OF CRUDE OIL IN THE DISTRICTS REACHED BY SUCH PIPE LINES, AND HAVE MONOPOLIZED THE PURCHASE OF CRUDE OIL, IS ENTIRELY UNSUPPORTED BY THE RECORD.

163

FIRST: LEGAL STATUS OF PIPE LINES OWNED BY VARIOUS DEFENDANT COMPANIES.

163

Synopsis.	Vol. I
	Page
SECOND : PIPE LINES MUST BE CONSIDERED UNDER TWO HEADS, VIZ. :	165
I. Gathering Lines, and	166
II. Trunk Lines.	
I. Gathering lines and their operation and relation to purchases of crude oil.	166
1. Gathering lines common carriers.	166
2. Crude oil purchases.	167
3. Crude oil prices.	169
4. Producers satisfied.	173
5. Sales to independent refiners.	173
II. Trunk Lines.	176
THIRD : THE CHARGE THAT THE DEFENDANTS HAVE EXACTED EXCESSIVE AND UNREASONABLE RATES FOR THE CARRIAGE OF CRUDE OIL AND RATES WHICH WERE DISCRIMINATORY AGAINST COMPETITORS OF THE STANDARD OIL COMPANY IS UNFOUNDED.	178
I. There is not an iota of evidence that there has been any discrimination in rates. On the contrary, the defendant companies for whom the pipe line companies have transported crude oil have invariably paid the full rates.	178
II. Rates not unreasonable.	178
FOURTH : THE DEFENDANT COMPANIES WHICH HAVE FILED OR CONCURRED IN FILED TARIFFS HAVE FULLY PERFORMED ALL THE DUTIES WHICH IN ANY VIEW OF THEIR LEGAL STATUS IT CAN BE CLAIMED THEY ARE OR EVER WERE LIABLE TO PERFORM.	182
FIFTH : THE TARIFFS FILED IN OR SINCE AUGUST, 1906, DO NOT IMPOSE UPON THE INDEPENDENT SHIPPERS UNREASONABLE CONDITIONS AS TO QUANTITY.	185
1. Amounts of minimum shipments fixed in good faith by defendants' experts in view of past experience and practical conditions of operation.	185
2. Tariffs place independent shippers upon the same footing as Standard Oil shippers in respect to minimum amounts of shipments.	187

3. Minimum amounts named in tariffs have been required of and observed by Standard Oil shippers both before and since the filing of the tariffs.	189
--	-----

SIXTH : CONTAMINATION ARISING FROM MOVING BATCHES OF CRUDE OIL OF DIFFERENT GRAVITIES OR VISCOSITIES IN THE SAME PIPE LINE IS THE PRINCIPAL CAUSE NECESSITATING LARGE SHIPMENTS.

194

I. Make-up and operation of a pipe line in actual practice.	194
II. General experience of experts as to contamination.	196

Principal causes of contamination or mixture of oils in pipe lines are (*a*) different rates of flow in same pipe, and (*b*) different rates of flow in parallel pipes of the same or different calibres.

196

III. Practical tests over the Southern Pipe Line.	198
IV. Corroboration by records of results of practical tests.	207

SEVENTH : THE USE OF PIPE LINES FOR COMMON CARRIER PURPOSES IS COMMERCIALLY IMPRACTICABLE, BECAUSE OF THE LOSSES ARISING FROM CONTAMINATION.

210

I. Loss resulting from mixture substantial because of wide difference in market values of crudes at refinery.	210
---	-----

II. The fact that various kinds of crude have been carried for Standard Oil shippers with the large resulting losses shown is immaterial because of the unified ownership of all the Standard Oil properties, whereby all the crude carried, whether benefited or injured in transportation, is owned by the same interests. Hence, the loss sustained is merely a necessary incident of a single great business.

211

III. Presumably independent shippers neither would nor could stand the loss resulting from the transportation of their high-grade oil with the low-grade oil of other shippers.	211
---	-----

IV. The difficulties arising from contamination and the great losses resulting therefrom in a system of the size and complexity of the lines of the Standard Oil companies cannot be remedied by the division of the lines.	212
---	-----

EIGHTH : TESTIMONY IN REBUTTAL.

215

NINTH: THE CHARGE THAT THE STANDARD OIL COMPANIES HAVE IN THE PAST SOUGHT TO PREVENT COMPETING PIPE LINES FROM DOING BUSINESS, AND HAVE HINDERED, OBSTRUCTED AND DELAYED THE BUILDING OF COMPETING PIPE LINES AND HAVE BOUGHT STOCK IN COMPETING PIPE LINES FOR ILLEGITIMATE PURPOSES, IS WHOLLY UNWARRANTED BY THE EVIDENCE.	220
1. The payment of premiums.	220
2. The suggestion that the Standard Oil Companies have obstructed the building of opposition pipe lines is not sustained by any evidence in the record.	222
3. There is no proof that pipe lines or stocks, or interest, in pipe line companies, have been purchased, except for legitimate business reasons.	223

CHAPTER V.**Alleged Contracts in Restraint of Trade.**

(a) Producers' movement of 1887.	225
(b) Purchases by Continental Oil Co. from United Oil Co. and Florence Refining Co.	226
(c) California contracts with Puente Oil Co., Union Oil Co. and Pacific Coast Oil Co.	226

CHAPTER VI.**Competitors.**

The Standard Oil Companies have at all times had competitors in all branches of the business, and new competitors have constantly appeared in the field. Collectively their business has grown and is growing faster than that of the Standard Oil Companies. Many of them are very prosperous.

231

VOLUME II.**CHAPTER VII.****Railroad Freight Rates.**

	Page
GENERAL STATEMENT.	243

I.

RAILROAD FREIGHT RATES.	243
THE INTERSTATE COMMERCE LAW.	244
THE ORIGINAL ACT.	245
THE AMENDMENT OF 1889.	245
THE ELKINS LAW.	247
PROOFS NECESSARY TO SHOW A VIOLATION OF THE LAW.	247
NO GOVERNMENT PROOF AS TO A GENERAL CONSPIRACY.	249
THE IMPOSSIBILITY OF A GENERAL DISCRIMINATION IN PETROLEUM OIL FREIGHT RATES.	250
TANK CAR OWNERSHIP.	251
METHODS OF FREIGHT MAKING.	251
GATEWAYS.	256
CLASSIFICATION, CLASS AND COMMODITY RATES.	257
RATE QUOTATIONS.	258
LOCATION OF REFINERIES.	266

II.

OLEAN SHIPMENTS.	267
HISTORY OF THE RATES IN QUESTION.	267
The Olean-Rochester Rate.	267
The Rochester-Norwood Rate.	269
The Norwood-Burlington Rate.	270
26½c. rate Olean to Norwood.	271
Various class rates upon which government relies.	280
THE GOVERNMENT'S CONTENTION.	280
No common arrangement.	281
Question of reasonableness and secrecy of 9c. Per Bbl. Rate.	282
Significance of the words "Not to be Posted" on Tariffs.	283
Meaning of the words <i>blind billing</i> .	285

Synopsis.	Vol. II
	Page
Explanation of use of 9c. per Bbl. rate on shipments to Vermont.	287
9c. Rate Rochester to Norwood, not secret. A reasonable rate.	288
Total cost of transportation Olean to Burlington reasonable.	290
USE OF UNFILED STATE TARIFFS ON INTERSTATE SHIPMENTS.	292
COMPARISON OF COST OF TRANSPORTATION TO THE STANDARD FROM OLEAN TO VERMONT POINTS, WITH THAT FROM INDEPENDENT REFINING POINTS.	303
State rates of the Central Vermont Railroad.	303
Tariffs issued for account of a particular shipper.	306
Table showing comparison of cost to Standard and to Independents.	307
Vermont State rates in combination with interstate rates.	310
NEW ENGLAND NON PRO-RATE.	312
Government in error as to the facts.	314
Grand Trunk, Toledo-New England Tariff.	316
The Government's rebuttal testimony.	323
B. & O. R. R. Tariff 4538.	331
Donovan letters as to Boston-Maine rates and Lake Shore & Michigan Railway rates.	334
Petitioner's Exhibits 621-625, inclusive.	335
Mr. Schindler's jugglery of rates.	339
Government's mistake as to pro-rate on commodities other than oil.	341
Reason of previous failure to pro-rate.	345
Boltz testimony as to New England rates.	346
The Fred G. Clarke Company opinion.	348
The Westgate freight bills.	349
Mr. Westgate's ignorance of actual rates.	355

III.

SUPPOSED DISCRIMINATIONS IN CENTRAL STATES.	357
The Basis of freight rates in C. F. A. Territory.	359
2c. Increase in oil rates in 1900.	365
Comparison of per ton per mile rates from Rochester with those from the shipping points of independent refineries.	367

Synopsis.	Vol. II
	Page
Rates to Detroit and Southern Michigan.	367
Tables pp. 158 to 161 of the Petition.	368
The Boltz comparison of oil and 6th class rates.	372
 IV. 	
SUPPOSED DISCRIMINATIONS IN SOUTHWESTERN TERRITORY.	373
History of Whiting-East St. Louis rates used.	373
The 18c. Rate.	375
Chicago Switching District.	377
Chicago & Alton application sheets.	381
Whether the 18c. and the 6c. Rates were reasonable.	393
Eleven cents the maximum lawful rate between Chicago and East St. Louis.	399
Tariff 24 not a legal tariff.	401
Explanation of the apparent low oil rates on the C. & E. I. R. R.	402
Supposed secrecy of six cent rate.	405
Chicago & Alton Railroad 10c. rate.	410
WATERS-PIERCE OIL COMPANY MATTER.	412
Shipments from St. Louis to Alexandria.	413
Shipments from St. Louis to points beyond Alexandria.	418
The one and one-half cent pipeline charge at St. Louis	421
SUPPOSED DISCRIMINATORY RATES FROM OHIO AND PENNSYLVANIA TO POINTS BEYOND EAST ST. LOUIS.	423
 V. 	
SUPPOSED DISCRIMINATIONS IN SOUTHERN STATES.	427
The Evansville Combination.	427
History of the 8½c. rate.	428
The 11c. Chicago-Evansville rate.	432
The six cent Evansville rate.	434
The supposed secrecy of the 8½ and the 6c. RATES.	439
Grand Junction Combination.	442
The rates used. 13c. rate.	443
Southern Railway rates.	448
The Government's contention.	449

Synopsis.	Vol. II Page
Were the Southern Railway rate issues tariffs or division sheets?	451
Blind billing under the 13c. rate.	468
Tariffs reading from Dolton and Riverdale.	470
Comparison of rates from Whiting into the South with those from Pennsylvania refining points.	472
Comparative shipments from various refining points into the South.	474
VI.	
THE PARKERSBURG-MARIETTA MATTER.	475
VII.	
SUPPOSED DISCRIMINATIONS IN CALIFORNIA.	478
Explanation of the overcharge claims allowed on shipments from Redondo.	481
VIII.	
ALLEGED RATE DISCRIMINATIONS IN KANSAS.	484
Explanation of the changes in rates.	485
Change in arbitrary weight per gallon.	489
IX.	
EXPLANATION OF ABSENCE OF THROUGH OIL RATES FROM EASTERN REFINING POINTS TO UPPER MISSISSIPPI RIVER CROSSINGS.	492
X.	
EXPLANATION OF ABSENCE OF THROUGH RATES FROM CENTRAL AND EASTERN REFINING POINTS TO THE PACIFIC COAST.	497

XI.

NO GENERAL SYSTEM OF DISCRIMINATION IN FAVOR OF THE STANDARD SHOWN AND THE ALLEGATIONS OF CONSPIRACY BETWEEN STANDARD OFFICIALS AND RAILROAD OFFICIALS NOT SUSTAINED.	501
Standard officials directors of railroads.	501
The Standard is not shown to be responsible for any high rates from independent points.	502
The specific instances of supposedly low rates used by the Standard do not show any conspiracy with the railroads to secure such rates.	506
The Government's rebuttal.	508

VOLUME III.**CHAPTER VIII.****Profits and Prices.****Profits.**

	Page
FIRST. CHARGES IN PETITION.	513
SECOND. THE GOVERNMENT'S THEORY FOR ESTIMATING PROFITS, AS SET FORTH IN THE PETITION, IS UNSOUND IN LAW AND DOES NOT ACCORD WITH BUSINESS PRINCIPLES OR THE FACTS OF HUMAN EXPERIENCE.	514
The Government's position is	
I. That in determining the profits of the business, all earnings during the entire duration of the business, whether drawn out and spent or prudently saved and reinvested, are to be aggregated and set off against the small and usually inconsiderable original investment.	514
II. That, in estimating the rate of profits, such profits are to be judged solely with reference to the nominal or par value of its outstanding capital stock, without regard to the amount of cash capital actually invested in the business.	514
III. The fundamental fallacy in the Government's position is that it ignores the enormous cumulative effect of compound interest.	515
IV. The only proper way to estimate the profits made by the Standard Oil interests is by considering the ratio which they bear to the intrinsic or money value of the total amount of capital invested in the business during the year for which the profits were taken.	516
V. All profits whatsoever of the Standard Oil interests are merged and included in what are denominated as the " <i>total net earnings</i> ".	517
THIRD : THE TOTAL NET PROFITS OF THE STANDARD OIL INTERESTS AS SHOWN BY THE RATIO OF THEIR "TOTAL NET EARNINGS" TO THE TOTAL NET VALUE OF THEIR ASSETS YEAR BY YEAR HAVE BEEN AND ARE REASONABLE.	519

(a) Table showing dividends, earnings and net assets for the years 1883-1896 and 1900-1906, and analysis of same.	519
(b) Average rate of profit shown by this table, which is less than twenty-five per cent. per annum, is a reasonable one for a manufacturing business like that of defendants'.	521

**FOURTH : PROFITS ON THE SALE OF REFINED OIL IN THE
UNITED STATES, WHICH IS THAT PART OF DEFENDANTS'
TOTAL BUSINESS UPON WHICH THE CHARGE OF MONOPOLY,
IF SUSTAINED, MUST BE BASED, FORM BUT A VERY SMALL
PART OF THE TOTAL PROFITS OR "TOTAL NET EARNINGS"
OF DEFENDANTS AND ARE RELATIVELY INCONSIDERABLE IN
TOTAL AMOUNT.**

522

(a) All products, other than refined illuminating oil, are by-products.	522
(b) The Government's case has proceeded substan- tially upon the theory that the defendants' business is primarily the manufacture and sale of illuminat- ing oil.	522
(c) More than half of defendants' total net profits are derived from the sale of by-products.	523

**FIFTH : THE INCREASE BOTH IN THE AMOUNT AND IN THE
RATIO OF TOTAL NET PROFITS, IN RECENT YEARS, HAS
BEEN CHIEFLY DUE TO THE INCREASED DEMAND FOR THE
VARIOUS BY-PRODUCTS, RESULTING IN A VASTLY GREATER
AGGREGATE OF SALES AT HIGHER PRICES.**

532

(a) Increase both in gross proceeds of, and ratio of profit on, naphtha and other by-product.	533
(b) Cause of rise in prices of naphtha.	534
(c) Apparent increase in rate of profits per barrel of crude explained.	535

**SIXTH : IN VIEW OF THE FOREGOING ANALYSIS, IT IS SUB-
MITTED THAT NEITHER IN THE AMOUNT OF DEFENDANTS'
PROFITS, NOR IN THE RATIO WHICH THEY BEAR TO NET
ASSETS, NOR IN THE INCREASED RATIO IN THE LATER**

YEARS OF THE BUSINESS AS COMPARED WITH ITS EARLIER YEARS, IS THERE ANY SUPPORT FOR PETITIONER'S CHARGE THAT DEFENDANTS HAVE MAINTAINED OR ATTEMPTED TO CREATE OR MAINTAIN A MONOPOLY.	538
--	-----

Prices.

I. CHARGES IN THE PETITION.	539
II. DEFENDANTS' ANSWER TO CHARGES IN PETITION.	540

FIRST: THE RECORD SHOWS NO UNREASONABLE ADVANCE IN DEFENDANTS' AVERAGE PRICES.	541
---	-----

- (a) Discussion of the average rise in prices in the United States between 1895 and 1906 of general commodities as shown in Report of Bureau of Labor. 541
- (b) Compared with the average rise in prices of general commodities, the rise in defendants' prices of refined oil from 1895 to 1906 was very small. 544
- (c) Comparison between rise in prices of refined oil and the rise in prices of 30 other commodities in the year 1906 over 1895. 544
- (d) Various other comparisons between the rise in prices of refined oil and other selected commodities. 546
- (e) The fairest comparison in respect to variation in prices is that between the course of prices of general commodities in the entire period under consideration and the course of the average prices of Water White oil for the same entire period. By this comparison the defendants are willing to be judged. 550
- (f) Actual course of prices of W. W. refined oil to dealers, less marketing cost and freight, 1895 to 1906, and what the course of prices would have been had the increases or decreases followed the increases or decreases in the prices of general commodities. 550
- (g) The course of defendants' prices in comparison with the course of prices of crude oil during the period 1895 to 1906. 555

Synopsis.

Vol. III

Page

(h) The rise in the prices of general commodities indicates a decline in the purchasing power of money during the period in question, measured by which decline there was no real increase in defendants' prices for refined oil during said period.	558
(i) Discussion of the economic law of demand and supply.	566

SECOND : DEFENDANTS HAVE NOT LIMITED THEIR OUTPUT BUT HAVE INCREASED THEIR FACILITIES AS RAPIDLY AND LARGELY AS POSSIBLE AND HAVE OPERATED THESE FACILITIES TO THEIR UTMOST CAPACITY. HENCE THE PRESUMPTION MUST BE THAT DEFENDANTS' PRICES HAVE BEEN REGULATED SOLELY BY THE NATURAL LAWS OF SUPPLY AND DEMAND.

567

I. No evidence in the record showing limitation of output.	567
II. The evidence shows : (1) A great increase in the pipe line mileage in the period 1882 to 1908 ; (2) A great increase in refinery capacity, 1882 to 1906 ; and (3) That both pipe lines and refineries have been regularly operated to their utmost capacity.	567

THIRD : THE ENORMOUS COMPETITION THAT STANDARD INTERESTS ARE SUBJECT TO MAKES IT IMPOSSIBLE FOR SUCH INTERESTS ARBITRARILY TO FIX AND CONTROL PRICES, EITHER OF CRUDE OR OF REFINED OIL.

569

(a) Standard has but a small percentage of total production	569
(b) The wide extent of competition.	569

FOURTH : VARIATION IN PRICES ALLEGED TO BE DUE TO THE ACTION OF COMPETITION.

570

(a) The extent and importance of variations in margins of profit are greatly exaggerated by the Government.	570
(b) Considered quantitatively, the gallonage of oil sold at margins unusually high or at a loss is so small as to be insignificant.	571

(c) The limits within which differences in margins of profit may be regarded as normal or accidental irrespective of the effect of competition.	572
(d) Considered numerically, the stations showing margins of profit within a reasonable range from the average profit are over 80 per cent. of the total number of stations.	573
(e) Nearly all instances of margins above 2.60 cents per gallon can probably be explained by the small populations of the towns or the sparse population of the district, with resulting small sales.	574
(f) Low margins compelled by the price cutting of competitors.	578
(g) Government exhibits show conclusively the widespread existence of competition in illuminating oil and the absence of any monopoly.	581
(h) Sales at different prices under the action of competition not illegal.	581
(i) Practice as to difference in prices and margins charged against the defendants is that pursued and defended by their principal competitors.	582
FIFTH : IT THUS APPEARS THAT THERE IS NOTHING IN THE COURSE OF DEFENDANTS' AVERAGE PRICES, OR IN ANY DIFFERENCES IN DEFENDANTS' MARGINS OF PROFIT THAT MAY HAVE EXISTED, DURING THE PERIOD UNDER EXAMINATION, NOR ANYTHING IN DEFENDANTS' CONDUCT TOWARDS THEIR COMPETITORS, WHICH IN ANY WAY SUPPORTS THE CHARGES OF ACTUAL OR ATTEMPTED MONOPOLY MADE IN THE PETITION.	585

CHAPTER IX.

Alleged Unfair Methods of Competition in Merchandising.

The testimony as a whole on this subject and the facts established thereby, as shown in the Summary, will be considered here under the following general heads :

587

Synopsis.

Vol. III

Page

I. Incompetency of testimony for petitioner.	
II. Local price cutting.	
III. Reports of competitors' shipments.	
IV. Operations of bogus independent companies.	
V. Payment of rebates on oil prices.	
VI. Miscellaneous subjects not specified in the pleadings.	
VII. Intra state character of the business.	587

I.

INCOMPETENCY OF TESTIMONY FOR PETITIONER AND FAILURE TO PROVE EXHIBITS RELATING TO THE SUBJECT OF "UNFAIR" COMPETITION.	588
Competitors as Witnesses: substantially all of their testimony is incompetent as hearsay.	588
Ex-employees: Their testimony largely incompetent.	594
Interstate Commerce Commission: Testimony taken before and read into the record. Testimony mostly incompetent.	597
Petitioner's Exhibits: Failure to prove them.	600
Explanation or contradiction of Petitioner's incompetent testimony and unproved Exhibits.	604

II.

LOCAL PRICE CUTTING.

PLEADINGS.	605
FACTS.	606
(a) General conclusion from the evidence.	606
(b) Nature of Petitioner's evidence on this subject.	606
(c) Nature of defendants' evidence on this subject.	607
(d) The Standard's policy and general practice regarding local prices in their relation to competition.	608
(e) All instances of alleged local price cutting referred to in the Government's testimony.	612

Synopsis.

Vol. III

Page

1. Standard Oil Co. (New Jersey): Baltimore, Md., 1904; Washington, D. C., 1904; Richmond, Va., 1903-1905: Norfolk, Va., 1902; Winchester, Va., 1895-1899.	612
2. Standard Oil Co. of New York: Towns along the Hudson, 1901-1902; Albany, N. Y., 1900-1902; Springfield, Mass., 1904-1905; Connecticut towns, 1905; increase in the business of Hisgen Bros.; Brooklyn, N. Y., 1896; Boston, Mass., 1897.	614
3. The Standard Oil Co. (Ohio): Cleveland, O., 1900-1902; Lorain, O., 1904, 1905.	618
4. Standard Oil Company (Kentucky): Atlanta, Ga., 1897-1898; 1901, 1906; New Orleans, 1897-1899; Birmingham, 1903-1904, 1905; Augusta, Ga., 1884, 1898, 1904; Terre Haute, Ind., 1897; In Competition with the Red C Oil Co. in South Carolina towns, 1904.	619
5. No Competitor's business destroyed.	623

LAW POINT ONE.

THE DEFENDANTS HAVE NOT MONOPOLIZED OR ATTEMPTED TO MONOPOLIZE ANY PART OF TRADE BY LOCAL PRICE CUTTING, NOR HAVE THEY EVIDENCED A PURPOSE TO MONOPOLIZE TRADE BY THAT MEANS.

624

1. The instances of alleged local price cutting referred to in the proofs are not relevant to show actual or attempted monopolization of any part of trade or a purpose to monopolize trade.	624
2. The instances of alleged local price cutting referred to in the proofs, were they all relevant, would still be utterly inadequate to show a purpose on the part of the defendants to monopolize trade by this means.	630

LAW POINT TWO.

THE POLICY OF THE DEFENDANTS ON THE SUBJECT OF LOCAL PRICES IN RELATION TO COMPETITION NEGATIVES THE EXISTENCE OF A GENERAL PLAN TO MONOPOLIZE TRADE BY MANIPULATING PRICES OVER AN EXTENSIVE AREA.

631

Synopsis.

Vol. III

Page

III.

REPORTS OF COMPETITORS' SHIPMENTS.

PLEADINGS.	633
FACTS.	633
(a) General conclusion from the evidence.	633
(b) Method of obtaining information of competitors' shipments.	634
(c) Use made of information of competitors's shipments.	638
(d) Securing the countermand of competitors' orders by means of information of competitive shipments.	640
(e) Cutting local prices at destination of competitive shipments.	641
(f) Cutting prices to consignees of competitive shipments to secure their future trade.	642
1. Standard of New Jersey.	642
2. Standard of Indiana.	643
3. Standard of Kentucky.	643
4. All other Standard companies.	644
LAW POINT.	644

IV.

OPERATION OF BOGUS INDEPENDENT COMPANIES.

PLEADINGS.	646
FACTS.	646
A. Wholesale marketing concerns operated by the defendants.	647
(a) Purchased and operated.	647
1. Operated to get the benefit of the brands and good will purchased, and to turn over the business to the Standard to the best advantage.	647
2. Operated to get the benefit of good will and also to do a business of selling oil in barrels.	648
3. Dixie Oil Works.	651
4. Republic Oil Company.	652

Synopsis.	Vol. III
	Page
(b) Organized or purchased and operated for special purposes.	654
1. The Eureka Oil Oil Co., 1897-1899.	654
2. Argand Refining Co.	655
3. Southern Oil Co.	656
4. Eagle Oil Co., 1901-1905	657
(c) General Statement.	658
B. Retail Marketing concerns operated by defendants.	661
(a) Can peddling departments.	661
1. General statement.	661
2. Method of operation.	666
(b) Various peddling concerns.	668

LAW POINT.

The defendants have not monopolized or attempted to monopolize any part of trade by the operation of so-called bogus independent companies, nor have they evidenced a general purpose to monopolize trade by such means.	670
1. Wholesale marketing concerns operated by defendants.	670
2. Operation of retail marketing concerns by the defendants.	674

V.

PAYMENT OF REBATES ON OIL PRICES.

PLEADINGS.	675
FACTS.	675
(a) General Conclusion From the Evidence.	675
(b) Standard Oil Co. (Indiana).	676
(c) Standard Oil Co. (New Jersey).	677
(d) Standard Oil Co. of New York.	678
(e) Standard Oil Co. (Kentucky).	679
(f) The Standard Oil Co. (Ohio)	681
1. Rebates before 1899.	681
2. Rebates after 1899.	683
LAW POINT.	684

VI.

MISCELLANEOUS SUBJECTS NOT SPECIFIED IN THE PLEADINGS.	686
(a) General Statement.	686
(b) Standard Oil Co. (New Jersey) : Miscellaneous Subjects.	687
1. Giving away oil.	687
2. Following competitors' wagons.	687
(c) The Standard Oil Co. of New York : Miscellaneous subjects.	688
1. Alleged threat against Hisgen Bros. Oil Co., 1904.	688
2. Measuring Hisgen Bros.' barrels.	689
3. Giving away oil.	690
4. Following competitor's wagons.	690
(d) Standard Oil Co. (Ohio) : Miscellaneous subjects.	691
1. Competition with C. B. Darby at New London, O.	691
2. Competition with M. M. Hossler at Chardon, O.	691
(e) Standard Oil Co. (Indiana) : Miscellaneous subjects.	692
1. Different brands of oil out of one storage tank.	692
2. Competition at Portland and Saranac, Mich.	692
(f) Standard Oil Co. (Kentucky) : Miscellaneous subjects.	693
1. Purchase of the Peoples Oil Co. from the widow Jones at Mobile.	693
2. Fraudulent tests of competitors' oil.	694
3. Contaminating competitors' oil.	696
4. Giving away oil.	696
5. Oil sold under different brands at different prices.	697
6. Arrangements with merchants for low retail price.	697
7. Employment of peddlers.	698

LAW POINT ONE.

THE DEFENDANTS HAVE NOT MONOPOLIZED OR ATTEMPTED TO MONOPOLIZE ANY PART OF TRADE, OR GIVEN EVIDENCE OF A PURPOSE TO MONOPOLIZE TRADE BY METHODS OF COMPETITION NOT SPECIFIED IN THE PLEADINGS.	698
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LAW POINT TWO.

THE TESTIMONY RELATING TO ALLEGED UNFAIR METHODS OF COMPETITION READ INTO THE RECORD IN CONNECTION WITH THE WATERS-PIERCE OIL CO. HAS NO RELEVANCY IN THIS CASE. 701

VII.

INTRASTATE CHARACTER OF THE BUSINESS. 703

CHAPTER X.**Galena-Signal Oil Company.**

PLEADINGS.	717
THE ESSENTIAL ALLEGATIONS IN THE PETITION RELATING TO THE GALENA-SIGNAL OIL COMPANY HAVE ABSOLUTELY FAILED OF PROOF.	718
GENERAL STATEMENT.	719
FIRST: THE GREAT SUCCESS OF THE GALENA OILS AND THEIR ALMOST UNIVERSAL ADOPTION ON THE STEAM RAILROADS OF THIS COUNTRY IS DUE, FIRST, TO THE SUPERIORITY OF THE OILS THEMSELVES, AND SECONDLY, TO THE IMPROVED METHODS AND EXPERT SUPERVISION INTRODUCED AND MAINTAINED BY THE GALENA-SIGNAL OIL COMPANY.	731
I. The superiority of the Galena oils.	731
The Galena oils are made by carefully guarded secret processes.	731
II. Improved Galena methods of lubrication.	735
1. Improved methods in regard to lubrication introduced and maintained by the Galena-Signal Oil Company.	735
2. Important results flowing from these improved methods.	738

	Synopsis.	Vol. III
		Page
III. Important result of the use of Galena oils and methods.		
1. Hot boxes.		739
(a) Causes of hot boxes.		739
(b) Importance of hot boxes as a factor in railroad operation.		740
(c) Reduction of number of hot boxes on American railroads due to the introduction of Galena oils and Galena methods of lubrication.		740
(d) Statistics showing reduction in number of hot boxes under the use of Galena oils and methods.		741
(e) The effect of the reduction in the number of hot boxes upon cost of repairs is amply shown in the record.		742
2. Other economies to railroads resulting from the use of Galena oils and methods.		743
(a) Saving in the cost of oil.		744
(b) Reduced cost of waste in packing journals.		745
(c) Saving in coal.		747
3. Inducements to railroads to practice economy in the use of oil, even though the actual cost of lubrication to the Oil Company may be largely above the total guaranteed cost.		748
(a) Stoppage of exhaust pipe in locomotive due to the excessive amount of oil used.		748
(b) Indirect economies due to example and improved discipline.		749
4. That the work done by the Galena experts could not be so efficiently performed by railroad employees is the all but unanimous opinion of the witnesses, and for two reasons. (a) Because no employee of a single railroad would have the wide experience gained by the Galena experts in their work on many different railroads. (b) Because the salaries paid to the Galena experts are much larger than those which it is possible for a single railroad to pay to an employee who could be charged with such work as the supervision of lubrication.		750

5. Moreover, the experience of railroads in other departments proves the advantage of placing the supervision of lubrication in the hands of specialists.	752
(a) Fire protection service.	752
(b) Expert engineer service.	752
(c) Suggested fuel inspection.	752
IV. Street railways.	753
The excellence of the Galena oils and methods is further attested by their wide and successful use on street railways under contracts similar in their provisions to the Galena contracts with steam railroads.	753
V. Foreign business.	755

SECOND. THE GALENA CONTRACT IS ONE FOR THE SALE OF LUBRICATION, AT A MAXIMUM COST PER UNIT OF SERVICE, AND NOT FOR THE SALE OF OIL AT A PRICE PER GALLON	756
I. This is the only fair construction to be placed on the language of the contracts themselves.	756
II. The testimony of the parties to these contracts and their course of dealings under the contracts amply sustain the construction of the contracts here contended for, namely, that they are contracts for lubrication and not primarily for the sale of oil by the gallon. In other words, <i>they are contracts providing for a maximum payment per unit of service and not per unit of quantity of oil consumed.</i>	760
III. The contracts of the New York Lubricating Oil Company, which are substantially identical in form with the Galena contracts, except as to the provisions about expert service, received from Mr. Harrison, an officer of that company (called by the Government as its principal witness on this branch of the case) a construction identical with that here contended for.	764
IV. The Galena contract being a contract to furnish lubrication at a maximum price based upon the unit of service, to wit, per 1,000 miles run, it is entirely immaterial either what the invoice prices are or how much of any kind of oil is consumed by the particular railroad,	

except where the total of the invoices for the oils furnished is less than the total costs to the railroads under the maximum guaranties.	765
THIRD : THE MAXIMUM GUARANTEED COST PER UNIT OF SERVICE TO THE DIFFERENT RAILROADS NECESSARILY DIF- FERS VERY WIDELY ON ACCOUNT OF LOCAL CONDITIONS AND THE PERSONAL EQUATION OF THE EMPLOYEES. IT ALSO DIFFERS FROM TIME TO TIME WITH THE SAME RAIL- ROAD, ESPECIALLY BECAUSE OF THE DIFFERENCE OF COST ARISING FROM CHANGES IN ITS EQUIPMENT.	767
I. Broadly speaking, the guaranteed cost to different railroads must vary according to local conditions and the personal equation.	767
II. The guaranties on the same railroads have frequently been decreased or increased from time to time, accord- ing as the cost of lubrication to the oil company has diminished under the educative effect of Galena meth- ods and expert supervision, or has increased on account of the increased weight of equipment.	768
III. The actual cost of lubrication on the same railroad differs not only from year to year but from month to month.	769
FOURTH : WHERE DIFFERENCES IN GUARANTIES ARE NOT EXPLAINED BY THE FOREGOING REASONS, THEY ARE GEN- ERALLY DUE TO DIFFERENCES IN THE HISTORICAL ORIGIN AND IN THE DEVELOPMENT OF THE PARTICULAR CON- TRACTS.	770
I. In the case of substantially all the steam railroads referred to in the record, the guaranties of cost in the original contracts were arrived at by taking a percent- age—usually 90 per cent.—of the previous cost of lubri- cation to the same railroad with the oils previously used by it.	770
1. In a number of instances the original first contract or a proved copy of the same was obtained and put in evidence.	771

II. Starting with maximum guaranties based upon a percentage of previous cost, the contract with each railroad changed with respect to its maximum guaranties according to the changes in the individual conditions of such railroad and without any reference to other railroads. This is proved by the testimony of various railroad witnesses.	773
III. An increase in the guaranty on one class of service is frequently offset by decreases in other classes, so that all guaranties must be examined together, in order to determine whether there has been any total increase.	777
IV. Different railroads or divisions thereof comprising parts of a single system frequently show different maximum guaranties, both in the first contracts covering such roads or divisions and from time to time thereafter. In such a case the weighted average of the maximum guaranties in the same class of service on all parts of the system must be considered in any comparison.	777
V. Contracts with the Pennsylvania System.	780
1. In the case of every railroad and every division of every railroad forming part of the Pennsylvania System, the first contract made by the Galena Company was based on a percentage of the prior cost to that railroad or division.	781
2. So far then, as the origin of the Pennsylvania guaranties is concerned, they stand upon precisely the same basis with the other railroads considered in the case. Thereafter, the changes in the guarantees on the Pennsylvania System were made upon like considerations as those which operated in the case of other railroads.	782
3. The disproportionate quantity of oils used on the Pennsylvania System, resulting, according to the Government's contention, in the payment by that system of low percentages of invoice prices is, and always has been, due to the extravagant and wasteful use of lubricants by Pennsylvania employees and to the refusal of the Pennsylvania	

management to permit the Galena experts to introduce their economical methods, and in general to the almost utter lack of co-operation on the part of the railroad with the Oil Company.	783
4. The great value of the Pennsylvania contract as an advertisement both abroad and in this country.	788
FIFTH : INCREASES APPEARING IN GALENA MAXIMUM GUARANTIES GENERALLY RENDERED NECESSARY BY INCREASE IN THE WEIGHT OF EQUIPMENT.	791
I. Within ten years, from 1897 to 1907, locomotives and cars on most if not all of the American steam railroads considered in this case greatly increased in average weight.	791
II. The cost of lubrication to the Oil Company increases substantially with the increase in weight of equipment.	792
SIXTH : THE NEW YORK LUBRICATING OIL COMPANY.	797
(a) Georgia Railroad.	800
(b) Central of Georgia.	801
(c) Louisville & Nashville R. R.	801
SEVENTH : THE GALENA INVOICE PRICES ARE NOT MATERIALLY HIGHER THAN THOSE OF OTHER COMPANIES WHOSE PRICES ARE SHOWN IN THE RECORD.	807
I. Prices of New York Lubricating Oil Co.	808
II. Higher prices paid for oil by the Danville & Western Railroad prior to its use of Galena oils.	809
EIGHTH : ASSUMING, BUT NOT CONCEDING, THE CORRECTNESS OF THE GOVERNMENT'S CONTENTION THAT THE GALENA SYSTEM OF CONTRACTS RESULTS IN THE SALE OF THE SAME PRODUCT TO DIFFERENT CUSTOMERS AT WIDELY DIFFERENT PRICES, YET THAT ASSUMED FACT WOULD SEEM TO BE IMMATERIAL. THE WEIGHT OF AUTHORITY IS IN FAVOR OF THE PROPOSITION THAT ONE WHO MANUFACTURES UNDER A SECRET PROCESS MAY SELL HIS PRODUCT TO WHOMSOEVER AND AT WHATSOEVER PRICES HE WILL.	809

Synopsis.

Vol. III
Page

NINTH: NONE OF THE CHARGES IN THE PETITION AND NONE RAISED BY IMPLICATION BY THE PETITIONER'S PROOFS HAVE BEEN SUSTAINED.	812
No proof of improper conduct on the part of the Galena- Signal Oil Company is to be found in the record. The success of the Company is due to the fact that it alone has been able to manufacture and sell the best railroad lubricants and to its unrivalled system of supervision of lubrication by experts.	812
TENTH: THE PETITION SHOULD BE DISMISSED AS TO THE GALENA-SIGNAL OIL COMPANY.	812

[END!]

VOLUME I.

CHAPTER I.

STANDARD OIL COMPANIES TO-DAY.

CHAP. I.

Standard Oil Companies To-day:

1. The Standard Oil Company (New Jersey) is a corporation organized under the laws of the State of New Jersey. By its charter it is authorized to do all kinds of mining, manufacturing and trading business, transport goods and merchandise by land or water, to lay and operate pipe lines, to purchase or otherwise acquire, hold, sell, assign or transfer shares of capital stock and bonds or other evidence of indebtedness of corporations and to exercise all the privileges of ownership, including voting upon the stocks so held (Bill of Complaint, p. 71). The authorized capital stock of the company is \$110,000,000, divided into 1,000,000 shares of common stock and 100,000 shares of preferred stock. On December 31, 1906, there were issued and outstanding 983,383 shares of its common stock (Pet. Ex. 9, Vol. 7, p. 30). The stock of the company is held by nearly 5,000 stockholders (Def. Ex. 1, Vol. 18, pp. 1-92).

The Standard Oil business is primarily the refining of petroleum and obtaining therefrom illuminating oil and other products. The refineries owned and operated by the Standard Oil Companies are as follows :

Company.	Capacity bbls. 42 g. crude yearly.
Atlantic Refining Co. :	
Eclipse Works, Franklin, Pa.-----	3,285,000
Pittsburg Refinery-----	461,725
Atlantic, Philad. & Marcus Hook refineries---	11,915,425
Solar Refining Co.-----	1,861,500
Standard Oil Co. (California)-----	6,807,980
Standard Oil Co. (Indiana) :	
Whiting, Ind.-----	8,192,790
Sugar Creek, Mo.-----	3,011,980
Wood River, Ill. :-----	
Standard Oil Co. (Kansas) .-----	1,645,500

Company.	Capacity bbls. 42 g. crude yearly.
Standard Oil Co. (New Jersey) :	
Bayonne Refy-----	13,840,435
Baltimore Div.-----	2,206,790
Camden Wks., Parkersburg-----	534,360
Eagle Works-----	3,273,320
Standard Oil Co. of New York :	
Atlas Works, Buffalo -----	982,215
Long Island Refy-----	1,950,195
Pratt Works, Brooklyn-----	1,578,990
Pratt Works, Long Island City (Tar)-----	530,710)
Sone & Fleming Works -----	1,689,950
Standard Oil Co. (of Ohio)-----	2,122,840
Vacuum Oil Co.:	
Rochester, N. Y. -----	
Olean, N. Y. -----	2,578,725
	(Def. Ex. 269, vol. 19, p. 627).

The refineries obtain their crude oil through pipe lines. These pipe lines comprise gathering systems in the various fields and trunk lines through which oil collected by the gathering lines is conveyed to the various refineries. The greater part of the crude oil consumed is purchased at the oil wells from the owners of the wells. A small proportion is obtained from oil lands owned by the Standard Oil Companies (Def. Ex. 267, vol. 19, p. 627). The illuminating oil and naphtha produced by the refineries, so far as they are marketed in the United States, are for the most part transported from the refineries in tank cars or in barges or vessels to tank stations in the various states and pumped into the tanks located at those stations. In some cases the smaller stations are supplied from main stations to which the oil or naptha has been sent from the refinery. The customers of the Standard Oil Company in the various states are for the most part supplied by tank wagons which distribute the oil or naptha from the local stations. Sixty-three per cent of the illuminating oil is exported and marketed abroad (Def. Ex. 276).

The plants used in the conduct of the Standard Oil business are owned in part directly by the Standard Oil Company (New Jersey) and in part by a number of companies the stocks

of which are owned by the Standard Oil Company (New Jersey). The properties owned directly by the Standard Oil Company (New Jersey) are much more extensive and important than those owned by any other single company. It owns the refineries at Bayonne, N. J., Claremont, N. J., Baltimore, Md. and Parkersburg, W. Va.; chemical plants for the manufacture of barrels and cases; the pipe lines in New Jersey and Maryland, and 344 marketing stations in New Jersey, Maryland, West Virginia, North Carolina and South Carolina. The Works at Bayonne are the largest of the Standard Oil plants. They include separate works for dealing with the by-products of the manufacture of refined oil, such as paraffine wax, naptha and lubricating oil, and for preparing or restoring various materials used for refining purposes, such as acid, clay and copper compounds (Deft. Ex. 280, vol. 19, p. 671). On December 31, 1906, the total net assets of the Standard Oil Company (New Jersey), irrespective of the stocks, bonds or other interest in any other companies, amounted to \$77,890,884.28 (Pet. Ex. 9, vol. 7, p. 28). This amount represented about 21.7 per cent. of the entire assets of the business.

The most important of the companies, whose stocks are owned by the Standard Oil Company (New Jersey) are:

(1) *Standard Oil Company of New York* owns the refineries located in the State of New York (except the two owned by the Vacuum Oil Company), and marketing stations in New York and New England.

(2) *Atlantic Refining Company* owns the refineries in Pennsylvania and marketing stations in Pennsylvania and Delaware.

(3) *Standard Oil Co. (Indiana)* owns the refineries at Whiting, and Sugar Creek, Mo. and Wood River, Ill., and marketing stations in a number of Western states.

(4) *Standard Oil Co. (California)* owns the refinery at Richmond, California, California pipe lines and marketing stations in the Pacific Coast States.

(5) *The Standard Oil Co. (of Ohio)* owns the refineries at Cleveland, Ohio, and marketing stations in Ohio.

(6) *Solar Refining Company* owns the refinery at Lima, Ohio.

(7) *Standard Oil Co. (Kansas)* owns the refinery at Neodesha, Kansas.

(8) *Vacuum Oil Company* owns plants at Olean and Rochester, N. Y. and is chiefly engaged in the manufacture of lubricating oils.

(9) The *Northern Pipe Line Company*, the *Southwest Pennsylvania Pipe Lines*, the *Southern Pipe Line Company* and the *Crescent Pipe Line Company* own pipe lines in Pennsylvania; *The New York Transit Company* owns pipe lines in New York; *The Buckeye Pipe Line Co.* owns pipe lines in Ohio; *The Indiana Pipe Line Co.* owns pipe lines in Indiana; *Eureka Pipe Line Co.* owns pipe lines in West Virginia; *Cumberland Pipe Line Co.* owns pipe lines in Kentucky.

(10) *The Prairie Oil & Gas Co.*, and the *Ohio Oil Co.* own some producing properties and also own private pipe lines. The former owns the pipe line constructed on its own right of way from Oklahoma to Griffiths, Indiana, where it connects with the lines of the Indiana Pipe Line Co.

The only other company of importance owning producing properties, whose stock is held by the Standard Oil Co. (New Jersey) is the *South Penn Oil Co.*

(11) *Standard Oil Co. (Kentucky)*, *Continental Oil Co.* and *Standard Oil Co. (Nebraska)*, are the chief companies engaged exclusively in marketing oil. The Standard Oil Co. (Kentucky), owns the marketing stations in the states south of the Ohio and east of the Mississippi, excepting Virginia and the Carolinas. The Continental Oil Co. owns the marketing stations in the Rocky Mountain States, and the Standard Oil Co. (Nebraska), operates only in Nebraska.

(12) *Anglo-American Oil Co. Ltd.*, organized under the laws of Great Britain, owns marketing plants in Great Britain; *Colonial Oil Company*, organized under the laws of the State of New Jersey, owns marketing plants in Portugal and Portuguese possessions and elsewhere in foreign countries. No other foreign company has been made a party defendant in the present action.

(13) The *Union Tank Line* owns tank cars that are largely employed in the transportation of the refined oil and naphtha produced at the various refineries.

The tank steamers, barges, floating equipment, etc. used in the business are owned by different companies, largely by the Standard Oil Co. of New York, and the Standard Oil Co.

(California). The vessels used in the foreign trade are for the most part owned by the foreign companies.

The foreign companies do no business in the United States, except that they purchase oil here to supply the requirements of their business (J. D. Archbold, vol. 17, p. 3296).

The Standard Oil Company (New Jersey) owns all of the stock of each of the companies above named.

II. Three important companies are made parties defendant to the Bill of Complaint, in each of which there is a large minority interest not owned by the Standard Oil Co. (New Jersey). These three companies are Chesebrough Manufacturing Company, Galena-Signal Oil Company, and the Waters-Pierce Oil Company.

(a) *The Chesebrough Manufacturing Company* is engaged in the manufacture and distribution of vaseline and various vaseline products. The practical conduct of the business is in the hands of the minority stockholders, who own nearly half the stock. The operations of the company have no relation to the present case.

(b) *The Galena-Signal Oil Company* has Works at Franklin, Pa. It is engaged in the manufacture of oils of a special character for the use of railroads. Its operations are conducted independently and have no relation to the general business of the Standard Oil Companies.

(c) *The Waters-Pierce Oil Company* has a capital stock of 400,000 shares divided into 4,000 shares, of which the Standard Oil Company own 2,747. The company has marketing stations in Missouri, Arkansas, Oklahoma, Texas and Louisiana, and also has refineries and marketing stations in Mexico. It purchases crude oil for the use of its Mexican refineries from the Standard Oil Companies, also refined oil and lubricating oil to supply its trade. It obtains crude oil and purchases refined oil from other sources also. The conduct of the business of the Waters-Pierce Oil Co. has always been in the hands of the minority stockholders, and the Standard Oil Company has nothing to do with the marketing policy pursued by it. The actual operation of the business of the company has always been directed and controlled by the minority stockholders, Mr. H. C. Pierce and his imme-

diate family (H. C. Pierce, vol. 3, pp. 1067-8; J. D. Archbold vol. 17, p. 3632).

III. A particular description of the other companies made parties defendant to the Bill is unnecessary. They play, no part in the general plan of the Standard Oil Company's business.

(a) A number of the companies named as defendants were liquidated many years ago, and are no longer in existence. The Companies that have been liquidated are

Acme Oil Company.
American Lubricating Oil Co.
Argand Refining Co.
Baltimore United Oil Co.
Bush & Denslow Manfg. Co.
Camden Consolidated Oil Co.
Eclipse Lubricating Oil Co.
Oswego Manfg. Co.
Standard Oil Co. of Minnesota.

To these may be added the Republic Oil Co. and the Standard Oil Co. (Iowa), each of which is now in liquidation.

(b) In several of the companies the Standard Oil Co. has no interest, except that it holds a minority of the stock. The companies, in which it is interested only as an investor, holding a minority of the stock, are

Tidewater Oil Company
Tidewater Pipe Co., Ltd.
United Oil Company

Standard Oil Company has no interest whatever. These companies are :

Buffalo Natural Gas Co.
Commercial Natural Gas Co.
National Fuel Gas Co.
Oil City Fuel Supply Co.
Pennsylvania Gas Co.
Salamanca Gas Co.
United Natural Gas Co.

(d) A number of other companies named as parties defendant are purely natural gas companies. The Standard Oil Company owns stock in them, but there is no evidence whatever in the case connecting them in any way with the charges made in the Bill of Complaint. These companies are :

Lawrence Natural Gas Co.
Connecting Gas Co.
East Ohio Gas Co.
Mahoning Gas Fuel Co.
Mountain State Gas Co.
The Northwestern Ohio Natural Gas Co.
Peoples' Natural Gas Co.
Pittsburg Natural Gas Co.
Taylorstown Natural Gas Co.

(e) A number of the companies named as parties defendant are companies in which the Standard Oil Company disclaims all interest. These are :

The Corsicana Refining Co.
Manhattan Oil Co.
Security Oil Co. of Texas,
Florence Oil & Refg. Co.

The National Transit Company at one time owned the Corsicana Refining Company, whose properties were created out of moneys of the National Transit Company. Long before the institution of the present action the properties were sold and the Standard Oil Company no longer has any interest in them.

(f) The other companies named as parties defendant in the Bill of Complaint are of minor importance and are in no way connected by any evidence with the charges in the Bill of Complaint, or with interstate or foreign trade or commerce. Such companies are :

Franklin Pipe Company, Ltd.,
Swan & Finch Company.

(g) Various companies, in which the Standard Oil Company owns stock, but which are not made defendants to the Bill of Complaint are named in Petitioner's Exhibits 1 and 11. These are for the most part foreign companies. Two or three are producing companies of minor importance ; some are natural gas companies ; the others are not engaged in the oil business or their business is of a purely local character. None of the companies referred to in this sub-division are in any way connected by the evidence with the charges brought.

CHAPTER II.

ORIGIN, DEVELOPMENT AND OWNERSHIP OF THE STANDARD OIL, BUSINESS AND PROPERTIES.

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ORIGIN, DEVELOPMENT AND OWNERSHIP OF THE STANDARD OIL BUSINESS AND PROPERTIES.

FIRST. Early Conditions in the Oil Industry.

I. THE DEPENDENCE OF THE PETROLEUM INDUSTRY UPON A CONTINUOUS SUPPLY OF CRUDE OIL AND THE UNCERTAINTIES AS TO THE SUPPLY GIVE A HAZARDOUS CHARACTER TO THE BUSINESS WHICH HAS PROFOUNDLY AFFECTION THE WHOLE COURSE OF ITS DEVELOPMENT.

1. Until 1886 substantially all the crude oil produced in the United States came from the fields of New York and Pennsylvania. These have long since reached their maximum production and are now on the decline. The production of the newer fields in West Virginia, Ohio and Indiana has long been decreasing. The largest output to-day is from the fields of Kansas and Oklahoma. At the present rate of output it may be expected that these fields within a few years will begin to decline. Southern Illinois is now an increasing field and for some years there has been a large production in California and in Texas (Def. Ex. 265, vol. 19, p. 624).

In the earlier days of the oil industry, New York and Pennsylvania fields alone were looked to for the supply of crude oil. The rapid development and subsequent decline of production in the different districts in New York and Pennsylvania are very striking. The first oil was produced in Crawford County, Pennsylvania, on the banks of Oil Creek. In 1865, the production was still confined to a district about 11 miles long in the valley of Oil Creek and extending up the valleys of the streams running into Oil Creek. (Emery, vol. 6, p. 2671). In 1870, the production was still confined to the neighborhood of the first discoveries. (Rockefeller vol. 16, p. 3056). The first operations in the Bradford field, McKean County, Pennsylvania and Allegany County, New York, were in 1875. In 1882-3 the production in this field reached 81,000 barrels per day (Emery, vol 6, p. 2741).

It has now fallen to 5,000 or 6,000 barrels a day (Emery, vol. 6, p. 2742). The Cherry Grove field, in Warren County, Pennsylvania, was developed about 1882, and for a few months produced many thousand barrels a day, and then failed entirely (Emery, vol. 6, p. 2742; J. D. Archbold, vol. 17, pp. 3234-35). In 1884 the Thorne Creek Field was developed in Butler County, but the production has now fallen off to little or nothing, and the same is true of a number of other smaller fields in Western Pennsylvania (Emery, vol. 6, p. 2743). The first oil was produced in Southwestern Pennsylvania in 1886 or 1887, and the Washington field and McDonald field reached their maximum development about 1891. Some of the wells in these fields produced as much as 5,000 or 6,000 barrels per day (Emery, vol. 6, p. 2744). These fields have declined like the rest. The production of the wells in the Pennsylvania field now averages less than one-half a barrel of crude oil a day (Emery, vol. 6, p. 2744). The fluctuations in the total supply of oil from the New York and Pennsylvania fields from 1859 to 1882, irrespective of the fluctuations in the particular fields whose output went to make up the total, are shown in Defendant's Exhibit 265 (vol. 19, p. 624). The production for each year between those dates was as follows :

Year.	Barrels.	Year.	Barrels.
1859	2,000	1871.....	5,205,234
1860.....	500,000	1872.....	6,293,194
1861.....	2,113,609	1873.....	9,893,786
1862.....	3,056,690	1874.....	10,926,945
1863	2,611,309	1875.....	8,787,514
1864	2,116,109	1876.....	8,968,906
1865	2,497,700	1877.....	13,135,475
1866	3,597,700	1878.....	15,163,462
1867	3,347,300	1879.....	19,685,176
1868.....	3,646,117	1880.....	26,026,631
1869.....	4,215,000	1881.....	27,376,509
1870.....	5,260,745	1882.....	30,053,500

2. During all this period and later there was constant apprehension that the available supply of crude oil would be exhausted and the value of all investments dependent upon such supply would be destroyed.

Mr. Archbold testifies as follows (vol. 17, pp. 3250-1) :

" Q. To what extent during the years that you have been connected with the oil industry has the business as a whole been dependent upon the discovery and

opening up of new fields ? I do not of course expect you to give any percentage extent, but can you give us some general idea of what relation there has been in the development of this business, between that development and the opening up of these newly discovered fields, that is, in connection with this industry as a whole, and what the fate of the business would have been if these new fields had not been discovered ?

* * * * *

A. I should say that through the earlier years of the business, up to a period in the eighties at any rate, there was constant anxiety as to the exhaustion of the fields; and up to a period I should say in the early eighties at any rate that anxiety was at times apparently well-founded. I recall very distinctly a period in the late sixties when it looked as though the exhaustion was imminent, and at that time I had serious apprehension of my own relation to the business. I know that the anxiety in that respect affected the disposition of investors very markedly indeed with reference to engaging in the business. They said, " Well, what assurance have we that the supply of this article will continue, and that these investments which you are contemplating in a class of construction that is good for no other purpose will continue in value ? " We heard that all through the earlier history of the business; and I say to my own criticism in respect to this general question that I could not escape sharing, in all the earlier years of the business, in that feeling myself, and I limited my relation to the business in the way of ownership because of that apprehension ; and at the expense of my own sagacity I might say that as late as early in the eighties I sold Standard Oil trust shares after the trust agreement was entered into, at 75 or 80 cents on the dollar ; in the very fear that it might not continue.

Q. The oil industry to-day, in so far as the production of crude is concerned, is essentially a mining business, is it not ? A. It is a mining business.

Q. Is there any way known by which you can measure the extent of the production from a given well when that oil well is opened up ? A. No, there is no way of judging with accuracy in that respect ; and I may say that with reference to the chance of finding oil the geologists have really been of very little aid to us as a whole. They often tell us where oil is not, but what they do not often tell is where oil exists, where oil is to be found.

Q. There is not any way of sending an expert into an oil well, as an expert may be sent into a silver mine

or a gold mine, with a view of estimating the capacity of that well, is there? A. Oh, none whatever, no sir.

Q. And the well that is a tremendous gusher to-day may be entirely unproductive to-morrow? A. It may; and it is true also that wells producing large quantities of oil have been discovered, and practically nothing developed about them, or nothing of any importance; mere pockets of oil, as it were.

Q. Before the Ohio field or the midcontinent field was opened up, was there any expectation on the part of the men who were in the petroleum industry or any reason to believe that such fields might be discovered and opened? A. I think there was no reason to believe it.

* * * * *

(Witness:) It was purely a speculative thing. People went into these sections and drilled wells and the oil was finally discovered. I might say, with reference to the great midcontinent field, that the question of there being oil there being raised with me at one time by an associate who heard the matter discussed abroad, I answered him that I would undertake to drink all the oil that was ever produced in that section." (vol. 17, pp. 3250-1).

In 1875, Mr. Henry E. Wrigley, then head of the Pennsylvania Geological Survey, concluded, after a thorough study of the situation, that the production had reached its maximum, and that, within three years, the supply of crude oil must decline. (J. D. Archbold, vol. 17, p. 3470). His conclusions were stated in response to a request for information from the Oil City Oil Exchange and were widely published throughout the oil regions (vol. 17, pp. 3470-2). In 1882, men well qualified to judge the situation estimated the duration of the oil fields at four years (J. D. Archbold, vol. 17, p. 3473).

Mr. Rockefeller testifies (vol. 16, p. 3072) as follows

"Q. Taking the conditions as they are during those years, just as they existed, did they import into the business of refining oil a serious element of risk and uncertainty? A. Oh, it could not be otherwise; it could not be compared to other businesses, of manufacturing and other undertakings, where we could know about our source of supply of the raw material, and the construction for the refining of the oil could not be utilized for other purposes.

Q. Was that a fact realized and appreciated at that time? A. Oh, it was a fact that caused the investors in the refining business always apprehension, anxiety; it could not be otherwise; and especially on account of the haste to increase in the earlier days. The refiners were investing so much of their money in plant. To be left with nothing but the plant, and the oil giving out, was of course very naturally causing anxiety, apprehension.

Q. At that time, Mr. Rockefeller, is it the fact that at that time wells would run and give out? A. Oh, certainly. That process obtained from the beginning of the history of oil—a flush production, then a general decline, and finally practical abandonment.

Q. Was that true at that time of limited districts, that there would be oil produced, and then the flow decrease and finally cease? A. Oh, yes; we had what was called flush production in the new fields, and some of them were very short lived."

The unwillingness of many to encounter the hazards due to the possible failure of the oil fields, on which the value of their investments was dependent, lead to their retirement from the oil business. Willingness to encounter the hazard and to make great exertions to reduce it to a minimum has been one of the great secrets of the success of those who staked their fortunes upon the future of the business.

II. THE CONDITIONS UNDER WHICH THE EARLY OIL BUSINESS WAS CARRIED ON NECESSARILY RENDERED IT SPECULATIVE IN THE HIGHEST DEGREE.

1. In the period immediately following the first discovery of petroleum, the oil was barreled at the wells and drawn by wagons across the country to Erie, Corry, or other shipping points (Emery, vol. 6, pp. 2672-3). The price of transportation by wagon was very high, varying from \$1.50 to \$3.00 or \$4.00 per barrel (Emery, vol. 6, p. 2682). Tank cars for the transportation of oil, after it had reached the railroad, did not come into use until after 1865. In that year, some wooden tank cars began to be used (Emery, vol. 6, p. 2673). Iron tank cars were first used about 1870 (Irwin, vol. 6, p. 3024). Shipment by water to Pittsburg was a mode of transportation employed to a considerable extent. The oil was loaded on

barges along Oil Creek and these were floated to the Allegany River on artificial floods produced by damming the Creek and afterwards releasing the accumulated water (J. D. Archbold, vol. 17, p. 3229). Branches of the various railroads eventually penetrated into the oil regions, and in 1869 a few small gathering lines had been constructed connecting oil wells with railroad shipping points. (See Def. Ex. 258). The first considerable gathering lines were built by Vandergrift and Forman (Lee, vol. 6, p. 3152). There were 20 or 30 lines constructed by different individuals. (Emery, vol. 6, p. 2725). All of the lines, however, were small local lines and for the most part were poorly constructed (J. D. Archbold, vol. 17, p. 3230). Their only business was to transport the oil from the wells to railroad shipping points. The first line extending beyond the oil regions and designed to do away with the necessity for railroad shipment was the Columbia Conduit Company, organized in 1874. This line was projected down the Allegany River to Pittsburg and when completed was 50 or 60 miles long (See Def. Ex. 259).

The local lines first became consolidated into an efficient system in 1877. Construction of trunk lines to the seaboard and other points outside of the oil regions did not begin until later, and no lines to the seaboard were completed until the early 80's (J. D. Archbold, vol. 17, p. 3320).

2. In the earlier days of the oil industry, the prices of crude oil were subject to tremendous fluctuations. The price of oil in the field prior to 1865 went down as low as 10c. a barrel, and oil from the same well was sold at \$16.00 a barrel (Emery, vol. 6, pp. 2679-2680). Many wildcat companies were established, ostensibly to engage in the production of oil, and the stocks of these companies were disposed of to the public. The result was utter demoralization of the business of production and in consequence the public lost confidence in the business and it greatly declined (Emery, vol. 6, pp. 2681). Between 1865 and 1870 there were wide fluctuations in prices. Oil sold for as much as \$7.25 per barrel (Emery, vol. 6, p. 2684), and as low as \$1.90 per barrel (Emery, vol. 6, p. 2683). The price of barrels at the same time was upwards of \$2.00 each (Emery, vol. 6, p. 2683).

The first oil exchanges were established in 1870 and 1871. An enormous amount of speculation in oil was carried on on

the exchanges (Emery, vol. 6, p. 2736). Wide fluctuations in price were daily occurrences. For instance, February 10, 1874, the price ranged from \$1.80 to \$2.10 per barrel, and in October of the same year oil sold as low as 70c. per barrel (Emery, vol. 6, pp. 2734-5). Naturally the development of the early refining industry was greatly affected by the conditions just described. Mr. Archbold testifies (vol. 17, p. 3230) as follows :—

“ Q. What do you say concerning wide fluctuations, if any, in the price of both crude and refined during those earlier years ? A. There were very wide fluctuations. The market was subject to the fluctuations not only of speculation which was very rampant for a period, but to all the attendant features of the mining business as such. There had not begun to be any system of reserved storage or reserved stock, and a single well would often influence the market very materially indeed, and it was in respect to the question of fluctuation of course, a business of hazard at that time.

Q. Was there much speculation in the purchase and sale of oil during those years ? A. From 1863 to 1866 there was a country wide speculation in oil stocks, oil lands, oil companies of all kinds. Following that there began a speculation in the oil itself, after a time when the stocks began to accumulate, and that attained very great proportions, oil exchanges being established at pretty nearly every financial center in the country, and the article being made a speculative medium to an enormous extent.

Q. What would you say was the effect of that tremendous speculation during those years upon the industry as a whole in respect to the question of stability or demoralization ? A. It resulted in very wide fluctuations, which made it a difficult and hazardous business for the manufacturer.”

III. PRIOR TO 1870 THE RUSH INTO THE BUSINESS OF REFINING OIL HAD RESULTED IN THE ERECTION OF REFINERIES WITH A TOTAL CAPACITY FAR IN EXCESS OF THE AMOUNT OF CRUDE OIL TO BE REFINED, AND THE PROFITS OF THE BUSINESS CONSEQUENTLY FELL OFF. MANY OF THESE REFINING ENTERPRISES LACKED ALL THE ELEMENTS NECESSARY TO ENSURE PERMANENCE AND STABILITY AND COULD NOT CONTINUE UNDER THE NEW CONDITIONS.

1. Refining oil seems to have been begun almost immediately after the discovery of crude oil. Within a few

years refineries had been established at many different places. Refineries were located at Cleveland at least as early as 1862. Mr. Emery testifies that there were at one time upwards of 250 refineries, one being located as far east as Portland, Maine, and one as far south as New Orleans (vol. 6, p. 2611). There were 15 or 20 in Cleveland, 40 or more in Pittsburg, and a large number in Erie, at one time as many as 75. Others were located at New York, Philadelphia, Boston, Corry, along Oil Creek between Corry and Oil City and along the Allegheny River. In 1870 the chief refining points were Cleveland, Pittsburg, Philadelphia, Baltimore, Parkersburg and New York. (J. D. Rockefeller, vol. 16, p. 3056). Mr. Rockefeller testifies, (vol. 16, pp. 3057-8) :

"Q. Was it a prosperous business during those years or any part of them ? A. It was a very prosperous business indeed in the beginning, very prosperous indeed.

Q. Did that lead to the erection of a good many refineries ? A. Of course the prosperity of those first engaged in the business was known to others, and the numbers of those who sought to engage in that very profitable business steadily and very rapidly increased.

Q. Give us an idea during that time of how a man could start a refinery. What sort of refineries were started ? A. Well, as a matter of fact, people from a number of other businesses, unfamiliar with this, engaged in this. I might say that people turned to this as a business from almost every other kind of business. Many of the persons engaging in this business of refining oil were not necessarily among our leading and best trained business men.

Q. Was there a rush into the business in those early years ? A. A great rush to the business of refining oil.

Q. What sort of refineries were put up ? A. All sorts and conditions of refineries, from very small ones to moderate sized and larger, according to the capital which the people could control who engaged in the business. Our construction was quite different from some of the very small and inferior ones. We started in with some pretty clear ideas of business, having had a number of years of practical business experience, and as far as we went we sought to build in the best possible way. We thought we had the model refinery at that time.

Q. In the oil regions what was the general character of the refineries that went up there during this period ?

A. In the oil regions I should say that the general character of the refineries was not on the average up to the refineries which were constructed at Cleveland. Many very inferior little refineries were constructed there.

* * * * *

(P. 3063) :

Q. Coming now to the years 1870 and 1871, what sort of years were those in the oil business ? A. The business of the late sixties, and around there, was very much overdone. The refineries had been constructed so rapidly that the profit in refining was very much lessened, so that we constantly looked to an increasing volume and a lessening profit for the good returns which we continually got out of the business ?

Q. What was the fact as to there being an excess of refining capacity in the country, disclosing itself through those years.

MR. KELLOGG: What years ?

WITNESS: The late sixties.

Q. And in 1870 and 1871. A. Yes, along in that neighborhood. The facts as I have stated were that there were more refineries than were required to refine the oil that was produced. The refineries consequently could not all run. They were part of the time idle. It was costing more to make the oil under such circumstances."

Mr. Archbold testifies (vol. 17, p. 3229) that the little refineries that sprang up in the oil regions were in many cases very primitive concerns, "often with single little goose-neck stills, hastily constructed and ineligible located as a rule, put up just in the hurry of the mining excitement of the early day, without much knowledge of what the business could or would develop into—mere makeshifts of concerns." Mr. Emery estimates that the capacity of the refineries was from 2 to 5 times the amount of the crude oil to be refined (vol. 6, p. 2712).

2. The business methods of the early refiners were as primitive as their equipment. The by-products of petroleum were not utilized. In 1870 the benzine derived from the crude petroleum was burned under the stills. The tars produced by the refining processes were run into the river (Emery, vol. 6, p. 2784; J. D. Archbold, vol. 17, p. 3257). The refined oil was

disposed of by advertising the oil and often sending samples to remote points with a view to inducing customers (J. D. Archbold, vol. 17, p. 3230). The product of the refineries was of very uncertain quality as to color, test and burning qualities, and the introduction for domestic use of slow progress. There was great distrust and opposition to its use for many years on the ground of its lack of safety, and because of its bad odor and bad general condition (J. D. Archbold, vol. 17, p. 3230). The refineries, as a rule, had no warehouses or shipping facilities at seaboard points, so that oil destined for export had to bear warehousing and lighterage charges at the seaports (J. D. Rockefeller, vol. 16, p. 3063).

3. Many of the weaker refineries had gone out of business before 1870. In 1865 there were 15 or 20 more refineries along Oil Creek than in 1870. Many people had gone together ; there had been many consolidations ; many had gone out of business (Emery, vol. 6, pp. 2674-5). Most of the small refineries in and around New York went out of business when the revenue tax on petroleum was removed ; apparently their margin of profit had depended upon their ability to evade the tax (Lombard, vol. 1, pp. 245-6). All of the export trade from Pittsburg had fallen into the hands of three firms : Waring, King & Co., Warden, Frew & Co. and Logan Bros. & Co. These three houses handled substantially all of the oil of the Pittsburg refineries (Irwin, vol. 6, p. 3010). The principal oil region refineries consolidated their business to the extent of having a common sales agent at New York (J. D. Archbold, vol. 17, p. 3241). Consolidation of the business was hastened by the improvidence of the early refiners in putting too much of their capital into refining plants, because of their fears in regard to the permanency of the supply of crude oil, and by the attitude of capitalists, among whom there had grown up a great distrust of the oil business and unwillingness to risk their money in it (J. D. Rockefeller, vol. 16, pp. 3067-8). Mr. Rockefeller says, in respect to the attitude of capitalists (vol. 16, p. 3065) :

“ They had been made familiar, in the early sixties, with many enterprises, notably in connection with oil producing, that had aroused their fears and created grave apprehensions. In those years many schemes, often of very little value, were floated on perhaps large

capitalization, and the buyers of those shares at these prices, which were advanced under the stimulus of the incoming of the production of the oil, lost money. There was general dissatisfaction, not only in that section of country, but I should say very broadly through the States. Whoever had money and was unwise enough to make purchases of those inflated shares had occasion to regret it afterwards, and we were suffering."

SECOND. The rise of the Standard Oil Company and the development of the Standard Oil business down to the Trust agreement of 1882.

I. THE STANDARD OIL BUSINESS FROM ITS INCEPTION HAD ELEMENTS OF PERMANENCE, STABILITY AND SUCCESSFUL DEVELOPMENT THAT WERE GENERALLY LACKING IN THE ENTERPRISES OF THAT PERIOD, AND AT THE TIME OF THE ORGANIZATION OF THE STANDARD OIL COMPANY OF OHIO IN 1870, WAS ALREADY THE MOST IMPORTANT SINGLE FACTOR IN THE OIL BUSINESS OF THE COUNTRY.

1. The history of the Standard Oil Company starts with the organization of the firm of Andrews, Clark & Co. at Cleveland within a year or two after the first discovery of crude oil. The members of the firm were John D. Rockefeller, Morris Clark, James Clark, Richard Clark and Samuel Andrews. They constructed a refinery, which, although small measured by present standards, was of good size for those days. The Clarks retired in 1865, Mr. Rockefeller having bought out their interest, and the business was then carried on under the firm name of Rockefeller & Andrews. Meanwhile the business had steadily grown and the capacity of the refinery had been increased (J. D. Rockefeller, vol. 16, pp. 3053-4). In 1866 the firm of Wm. Rockefeller & Co. was organized. The firm of Rockefeller & Andrews and Wm. Rockefeller constituted this firm. Wm. Rockefeller & Co. built in 1866 a refinery on land adjoining that occupied by Rockefeller & Andrews. In the same year a third firm was organized under the name of Rockefeller & Co. It was composed of the same three gentlemen who made up the firms of Rockefeller & Andrews and Wm. Rockefeller & Co. Rockefeller & Co. were located in New York and their business was the sale for export of the oil manufactured by the

other two firms and the warehousing of oil in New York. Mr. Wm. Rockefeller moved to New York to conduct the business of Rockefeller & Co. By the establishment of this New York house, the partners hoped to develop the sale of oil from New York, to save the expense of commission men, and by doing their own warehousing to reduce to a minimum the cost of handling oil destined for export (J. D. Rockefeller, vol. 16, pp. 3054-5). In 1867 the three firms were consolidated under the firm name of Rockefeller, Andrews & Flagler. H. M. Flagler became a member of the new firm, and a large amount of additional capital was put into the business (J. D. Rockefeller, vol. 16, p. 3055). The new firm then owned two refineries in Cleveland and had a commission and warehousing branch in New York, from which the oil destined for export was handled. They also had a domestic trade in oil from Cleveland. This was a steadily growing trade and so far as it could be secured was preferable to the export trade (*id.*). This firm continued until the organization of the Standard Oil Company of Ohio January 2nd, 1870. The business meanwhile had shown a steady growth and increase. Each of the partners gave his entire time to the business and each of them devoted himself to the study of everything that would promote its growth in every department, manufacturing, merchandising, and finance (J. D. Rockefeller, vol. 16, p. 3056). Their refineries were constructed in the most substantial manner. Samuel Andrews, one of the members of the firm, was a practical refiner of oil, trained in the business and one of the few men at that time capable of making good illuminating oil (J. D. Rockefeller, vol. 16, pp. 3057-8). The members of the firm were constantly adopting new ideas and putting them into practice for the benefit of the business (J. D. Rockefeller, vol. 16, p. 3059). One of the innovations introduced by them was the manufacture of their own barrels by machinery. They established their own barrel-making plant about 1867. Prior to that time they had been purchasing barrels from small barrel makers, and the barrels so procured were often of inferior quality, causing loss by leakage. There was frequently difficulty in obtaining a sufficient supply even of these barrels. The cost was \$2.50 per barrel. The result of the establishment of the barrel making plant was that an adequate and regular supply of barrels was secured. The quality was improved, so that the loss by leakage was saved and the

cost per barrel was reduced from \$2.50 to \$1.25 (J. D. Rockefeller, vol. 16, pp. 3059-3061). Other innovations in the business introduced by the firm were the establishment of the branch house in New York and the establishment there of warehouses (J. D. Rockefeller, vol. 16, p. 3061), and the acquisition by the firm of its own lighters in New York for transportation of its oil from the cars to the warehouses. The method pursued by the firm from the beginning was to provide its own facilities rather than to hire the facilities of others, and this was done as fast as capital could be obtained (J. D. Rockefeller, vol. 16, p. 3063).

2. The location of the refineries at Cleveland afforded the firm considerable advantages as compared with refineries located at other points. Cleveland is between 135 and 150 miles Northwest of the oil regions. This, of course, subjected the firm to the expense involved in the transportation of oil to its refineries. This disadvantage was more than compensated for in other ways. Cleveland was the best point for the development of the domestic trade. The Great Lakes furnished ready means of transportation to the Northwestern country and different railroads radiated towards the West and South. Access to the seaboard might be had over one of several routes: Over the Lake Shore and N. Y. Central roads, over the Atlantic and Great Western, and Erie, over the Pennsylvania Road, or by water through the Erie Canal. Canal boats loaded with oil at Cleveland could be unloaded at the firm's docks in New York City (J. D. Rockefeller, vol. 16, pp. 3056-8).

3. The most important element in the success of the business in its early days and subsequently was the recognition by its owners of the fact that they could not afford to tie up all their available resources in the construction of refineries (J. D. Rockefeller, vol. 16, p. 3067), and their success in obtaining the capital which they thought to be necessary not only to provide facilities for economies in the conduct of the business, but, also to meet emergencies and the changing conditions of the business (J. D. Rockefeller, vol. 16, p. 3066). From the beginning they enjoyed high credit and were large borrowers, and the establishment of their branch house in New York enabled them to secure large sums of money at lower rates than could be obtained in the West (vol. 16, p. 3061).

4. The position of the business was greatly strengthened in 1870 by the organization of the Standard Oil Co. of Ohio. The capital of the new company was \$1,000,000, which was a very large capitalization in 1870. Large capitalists, who had watched the progress of the firm and had confidence in its members, took stock in it. The most important of these were Mr. A. Stone and Mr. S. P. Handy, of Cleveland, and Mr. O. Jennings and Mr. Benjamin Brewster, of New York. They not only contributed large amounts in payment for the stock subscribed for by them, but their connection with the company greatly increased its ability to borrow money necessary for the further expansion and development of the business (J. D. Rockefeller, vol. 16, p. 3062). The new corporation took over all the properties of the firm, Rockefeller, Andrews & Flagler. Their refineries were at that time not only much the largest in Cleveland, but were the largest in the entire country (J. D. Rockefeller, vol. 16, p. 3059). Their business was probably fully 10 per cent. of the entire petroleum business of the country (J. D. Archbold, vol. 6, p. 3269). By reason of the various innovations they had introduced, the new company was able to save a large part of the expenses which their competitors had to bear (J. D. Rockefeller, vol. 16, p. 3063). Its ability to conduct the business economically and its strong financial position made it inevitable that it would survive in the impending struggle for existence due to the overconstruction of refining-plants.

II. THE ACQUISITION BY THE STANDARD OIL COMPANY IN 1871 AND 1872 OF VARIOUS REFINERIES IN CLEVELAND WAS THE NATURAL RESULT OF THE CONDITIONS PREVAILING IN THE OIL INDUSTRY.

1. The reasons for the acquisition of the Cleveland refineries can best be given in Mr. Rockefeller's own words ; he says : (vol. 16, pp. 3066-7.)

“ Q. Now you can add what you were going to say ?

A. We recognized that if we would succeed, we must, if possible, increase the volume of our business with a given expense, and thus reduce the cost of the business in every department of manufacture and merchandising, and the same held true in reference to these warehouses. If we could put through a warehouse two or three thousand barrels instead of one thousand in a

day, we reduced our cost. It was along the line of smaller profits and a larger volume.

* * * * *

Q. What led you to make these purchases, or your company? You were president of the company, were you not? A. I was president of the Standard Oil Company of Ohio. The extension of our domestic business primarily from this point, which we regarded as the most favored point for the domestic trade.

Q. You say that was your principal reason, to enlarge. A. To acquire these businesses and this trade which we ourselves had been conducting since our entry into the refining business, and this local trade, retail trade, which we desired very much to extend.

Q. Each of these concerns had a refining capacity? A. Oh, yes.

Q. And they were marketing their products to the domestic trade? A. And had trade themselves. I refer now to the trade through the country. I am speaking now about the home trade, as we say, through our own country, not the export."

The desire of the other refiners to sell does not require much explanation. It was a recognized fact at that time, because of the condition of the business, that all businesses were going to require more and more capital (J. D. Rockefeller, vol. 16, pp. 3065-6). The other refiners for the most part had failed to recognize the danger of investing all their available capital in refineries (J. D. Rockefeller, vol. 16, p. 3067). The rate of profit was constantly lessening and good returns could be obtained only by enlarging the volume of business and introducing economies into its conduct (J. D. Rockefeller, vol. 16, p. 3063). In respect to the negotiations leading up to these purchases, Mr. Rockefeller says :

" Q. Well, to begin with, were you all Cleveland men? A. We were; neighbors, acquaintances, friends, having had our prosperity there together in the business in the good days; and beginning generally to recognize the changes that were coming, and the lessening of the chance of good returns from the refining business on account of the overproduction of refined oil, or of the over-production of the refinery construction." (vol. 16, p. 3065).

2. The first of these purchases, was the purchase of the business of Clark, Payne & Company in the latter part of the

year 1871. The refinery of Clark, Payne & Company next to those of the Standard Oil Company had the largest capacity of any refinery in Cleveland. About the same time, the business of Alexander, Scofield & Company was purchased. In 1872 and subsequently, most of the Cleveland refineries, engaged in manufacturing illuminating oil, were purchased (J. D. Rockefeller, vol. 16, pp. 3064-5). The refineries were utilized; the best of them were continued in operation, as, for example, the works purchased from Clark, Payne & Company; Alexander, Scofield & Company; Clark, Schurmer & Company; Hanna, Baslington & Company, and Westlake, Hutchins & Company. The various refineries of the Standard Oil Company in Cleveland were connected by systems of pipes and the entire refining capacity was consolidated so that it could be operated to the best advantage and most economically (J. D. Rockefeller, vol. 16, p. 3161).

3. The stockholders of the Standard Oil Company were not prepared to lay out all of their available resources in the purchases of these refineries. Such a course would have left them without sufficient capital to provide for the present and future needs of the business. Therefore, in order to obtain funds to pay for the refineries, the capital of the company was increased from \$1,000,000 to \$2,500,000. The sellers were given the option of taking stock in the Standard Oil Company of Ohio or cash in payment for their properties. It is significant of the general want of confidence in the stability of the oil business that the general preference was for cash (J. D. Rockefeller, vol. 16, p. 3068). By these transactions the Standard Oil Company, without impairing its available capital, increased the volume of business for which its facilities could be employed. It increased its domestic markets and undoubtedly to a much greater extent increased its refining capacity and its ability to enlarge its export trade.

III. THE EXPANSION AND DEVELOPMENT OF THE STANDARD OIL BUSINESS SUBSEQUENT TO 1872 FOLLOWED A NATURAL AND LOGICAL COURSE. SO FAR AS THE ACQUISITION OF EXISTING PLANTS PLAYED A PART IN SUCH EXPANSION AND DEVELOPMENT, THE MOST IMPORTANT OF THESE HAD BEEN ACQUIRED PRIOR TO 1875.

1. The fact that the expansion of the business frequently took the form of the acquisition of properties already originated by

others was almost inevitable in view of the conditions existing in the oil industry. The acquisitions, to which important factors in the present business of the company can be traced, had for the most part been made by the end of 1874. The owners of the business had abundant capital, energy and enterprise. Above all, they had faith in the future of the business and the courage to risk their capital, their credit, their earnings and profits upon the chance that it would continue to prosper. Others who had engaged in the business not only lacked necessary capital but also lacked faith in the future, and the courage to face the hazards of the business. Various refineries, marketing facilities and other properties suitable for use in the business had been established at points to which, in the course of its expansion, the Standard Oil Co. desired to extend its operations. The natural outcome of the situation was that in many instances the Standard Oil Co., instead of duplicating properties already in existence at such a point, purchased those properties as a nucleus for the business which it wished to locate there; and likewise the trade or goodwill in many localities to which the Standard Oil Co. wished to obtain access for its products had been acquired by local refiners, jobbers or exporters, who, perhaps, on account of inability to maintain their position in the trade, or for other reasons, desired to dispose of their trade and goodwill. In many such cases, also, the Standard Oil Co. became the purchaser.

2. The purchase of various Cleveland refineries in 1871 and 1872 had added largely to the domestic trade of the Standard Oil Co. They had, however, to a still greater extent, enlarged its refining capacity and increased the surplus of its products, for which markets must be found. The natural disposition to be made of this surplus was to export it. The large increase in oil available for export made it desirable to add to the shipping facilities at the seaboard and to acquire new markets abroad. The *Long Island Refining Co.* was located at Long Island City. It had warehouses and a very extensive dock property located on deep water, accessible to ocean-going ships. The Company also had a refinery connected with its warehouses and docks. In 1872 or 1873 the Company was acquired in order that its properties might be used in the business of the Standard Oil Co. (J. D. Rockefeller, vol. 16, p. 3075). The warehouses and dock properties were

used in the handling of the Cleveland oils that came on for export. (J. D. Rockefeller, vol. 16, p. 3075). The use to be made of the refinery was to be determined by future developments. (J. D. Rockefeller, vol. 16, p. 3076). It was a refinery of considerable size, having more or less domestic trade around New York, and its product was of course available for the export trade. It was the first refinery owned by the Standard Oil interests at the seaboard, and was regarded as more or less of an experiment. (J. D. Rockefeller, vol. 16, p. 3075). The *Devoe Manufacturing Co.* was also located on Long Island and had shipping facilities on Newtown Creek which runs into East River at Long Island City. The business of the Devoe Co. was the putting up of oil in cans for the canning trade. The oil which it put up was apparently manufactured by refineries belonging to other parties, and was either specially manufactured for it or purchased by it. The Company had some domestic trade and a very desirable trade in Europe, where it had established a very good reputation and obtained very high prices for its distinctive brands of oil. It manufactured the cans which were used in its trade, and had succeeded in producing these cans at a minimum cost. They were a specialty of the Devoe Manufacturing Co. and were especially adapted for use in the Oriental trade, and by the use of them the Devoe Manufacturing Co. had built up a great reputation in the Far East. In 1873 the Standard Oil interests purchased a controlling interest in this Company. It thereby at once obtained a market for a large part of its surplus destined for export, and acquired the means of further extension with the expansion of the case oil business. (J. D. Rockefeller, vol. 16, pp. 3076-3077.)

3. Meanwhile the Standard Oil interests had not been idle in seeking to extend their domestic markets. *Chess, Carley & Co.* were a copartnership having a refinery at Louisville, and a very large domestic trade in refined oil, chiefly in the southern and southwestern sections. This trade they had worked up with great industry, skill and ability. In 1873 the Standard Oil interests acquired a half interest in the firm of Chess, Carley & Co. The object of the purchase was to extend the domestic markets of the Standard Oil Co. to the territory in which Chess, Carley & Co. were doing business, thereby secur-

ing an additional outlet for the product of its refineries. (J. D. Rockefeller, vol. 16, pp. 3077-3078.)

4. In 1874 the demands of the home trade were such that additional refining capacity was necessary to supply the export trade and to utilize advantageously the facilities for the export trade that had previously been acquired. It was also considered wise that a branch of the Standard Oil Co. should be located in the oil regions. In the constant controversies between the railroads as to the relative proportions of the oil traffic to which they considered themselves entitled, conditions might arise that would put Cleveland at a disadvantage as a refining point. The refineries in the oil regions not only had their supply of crude material at their doors, but were considerably nearer to the seaboard than Cleveland (J. D. Rockefeller, vol. 16, p. 3069). J. J. Vandergrift and John Pitcairn had erected a refinery on the Allegheny River, a mile or a mile and a half above Oil City. It was a large, modern refinery with good shipping facilities. This refinery, known as the Imperial Refinery, was purchased outright by the Standard Oil interests in 1874. It was utilized to supply oil for the export trade (J. D. Rockefeller, vol. 16, pp. 3078-3079).

5. The most important of the acquisitions by the Standard Oil interests, of enterprises not originating with them, was the acquisition in 1874 or 1875 of the properties of *Charles Pratt & Co.* of New York, and of *Warden, Frew & Co.* of Philadelphia. The total value of these acquisitions was about \$3,000,000.00 (J. D. Rockefeller, vol. 16, p. 3082). *Charles Pratt & Co.* was a New York corporation of which Mr. Charles Pratt and Mr. H. H. Rogers were the chief stockholders. They had a refinery in Brooklyn on the East River. They had established a high reputation for certain brands of oil, among others Pratt's Astral Oil, which was a very well known and popular brand of oil for a long time. They had given much attention to cultivating the domestic trade. They had also gone into the case oil business and had built up quite an extensive case oil business in the Far East. They had dock properties and warehousing facilities, and a great deal of cash capital (J. D. Rockefeller, vol. 16, pp. 3079-3080). *Warden, Frew & Co.* were a firm composed of Wm. G. Warden, Maj. Frew

and Charles Lockhart. In Pittsburg the same partners carried on business under the firm name of Lockhart, Frew & Co. (J. D. Rockefeller, vol. 16, p. 3080). Warden, Frew & Co. were the chief owners of the *Atlantic Refining Co.*, of Philadelphia. This Company had a large refinery and dock facilities and a plant for putting oil into cans. (J. D. Rockefeller, vol. 16, p. 3080). Warden, Frew & Co., and Lockhart & Frew, had become largely interested in the Pittsburg refineries. (Irwin, vol. 6, p. 3023). One of these refineries was owned by the Standard Oil Co. of Pittsburg. This Company had no connection with the Standard Oil Co. of Ohio. (J. D. Rockefeller, vol. 16, p. 3081). Another refinery which Lockhart & Frew owned or controlled was the Model Oil Co. (J. D. Rockefeller, vol. 16, p. 3081). Another was known as the Brilliant, and there were still others which they owned or controlled. (J. D. Rockefeller, vol. 16, p. 3082). The Standard Oil interests, in 1874 or 1875, acquired Charles Pratt & Co. and the companies controlled by Warden, Frew & Co., and Lockhart, Frew & Co. in Philadelphia and Pittsburg, to wit: The Atlantic Refining Co., The Standard Oil Co. of Pittsburg, The Model Oil Co., and the other refineries controlled by Lockhart & Frew located at Pittsburg. The chief object of these purchases was the extension of the export business. The refining capacity of the Standard Oil interests at New York was greatly extended. A foothold was obtained at Philadelphia, a seaboard refining point of great importance, and the advantages afforded by Pittsburg as a refining point were obtained. A valuable existing trade, both domestic and foreign, in special brands of oil was obtained as well as local business which could be done advantageously from Pittsburg, Philadelphia and New York. (J. D. Rockefeller, vol. 16, p. 3082). The ability of the Standard Oil Co. to supply the increasing demands of its export trade without diminishing the product available for the supply of its domestic consumers was by these accessions greatly increased and refining points from which its existing domestic trade, as well as its export trade, might be supplied most advantageously were secured. By the multiplication of its refining points the dangers incident to changes in railroad conditions were diminished and the volume of its business was increased to such an extent that it could more safely pro-

ceed with the great expenditures necessary for the further development and extension of the business.

6. The works of the Long Island Refining Co. and of Charles Pratt & Co. have expanded into three of the great refineries now owned by the Standard Oil Co. of New York. The plant of the Devoe Manufacturing Co. is now the shipping plant of the Standard Oil Co. of New York. The works of the Atlantic Refining Co. at Philadelphia and the various works at Pittsburg have grown into the Philadelphia and Pittsburg works of the Atlantic Refining Co. Chess-Carley Co. was the forerunner of the Standard Oil Co. (Kentucky) (Def. Ex. 282, vol. 19, at p. 677, and Def. Ex. 271, vol. 19, at p. 635).

IV. PIPE LINES.

TO INSURE AN ADEQUATE AND CONSTANT SUPPLY OF CRUDE OIL FOR THEIR REFINERIES THE CONSTRUCTION AND ACQUISITION OF PIPE LINES BY THE OWNERS OF THE STANDARD OIL BUSINESS BECAME A MATTER OF NECESSITY. ON THE OTHER HAND, THE EXPENSE INVOLVED IN PROVIDING AN ADEQUATE PIPE LINE SERVICE TO REACH AND CONSERVE THE OUTPUT OF CRUDE OIL WAS SUCH THAT A VERY LARGE VOLUME OF BUSINESS WAS NECESSARY TO JUSTIFY THE UNDERTAKING.

1. The small gathering lines through which the supply of crude oil was obtained for the refineries in the early days, as a rule had been poorly constructed, and the construction that was necessary was not properly understood, and for a number of years their service was very poor indeed (J. D. Archbold, vol. 17, p. 3230). They had been built and were owned by different individuals, and their management was very lax (J. D. Archbold, vol. 17, p. 3231). The matter of the supply of crude oil was of course of the greatest importance to the Standard Oil business. Many of the existing pipe lines were very small. They lacked the capital for necessary extensions as the oil fields developed (J. D. Rockefeller, vol. 16, p. 3094). Unless the pipe lines were extended promptly to take care of the production of newly opened wells, much oil would go to waste, and the supply of the refineries would be jeopardized. Very early it was recognized that improvements in the pipe lines were very much needed (J. D. Rockefeller, vol. 16, p.

3094). The demands for capital in other departments of the business were, however, so great that the matter of providing pipe line facilities was for a time postponed (J. D. Rockefeller, vol. 16, p. 3093).

2. In 1873 and 1874 the Standard Oil interests purchased the *American Transfer Co.*, at that time one of many small gathering lines (Def. Ex. 259; J. D. Rockefeller, vol. 16, pp. 3093 and 3201), and bought an interest in some of the lines of Vandergrift & Forman, which were considerable for that time, and formed the nucleus of the system afterwards known as the United Pipe Lines. The object of these purchases was to make sure of an efficient pipe line system to supply the service (J. D. Rockefeller, vol. 16, p. 3093). The necessary work of construction to meet the demands of the situation was carried forward by the American Transfer Co. and the United Pipe Lines, with the backing of the Standard Oil interests (J. D. Rockefeller, vol. 16, p. 3093). Existing pipe lines that could profitably be incorporated into the system were purchased from time to time, until, about 1877, through acquisition and construction an efficient system had been created. (J. D. Rockefeller, vol. 16, pp. 3092-3095.)

Mr. Rockefeller testifies (vol. 16, p. 3094) :

"Q. And in the conditions of the business as they were in those years, when you acquired these pipe-line interests, as I understand you, you regarded them as an important and necessary adjunct to your business as refiners? A. Oh, yes; we did. We came to feel more and more that as we required more oil to use we must have means of getting it, and without interruption, and see to it, too, that as the supply of oil increased there was no question about the additional and necessary pipes to take care of it. Great floods of oil came, and with the capital which we introduced we made it our business to see to it that the oil was saved and taken care of. It became a large business of itself, of very great importance to the whole industry.

Q. You built tanks to store the oil? A. Oh, yes; we built tanks. We continued to build tanks year after year. It was a very interesting experience through which we passed, that business of building the tanks.

Q. And you have now given us the reason why you went into the acquisition and construction of pipe lines. A. I have; yes. And the subsequent experience proved that it was a matter of great moment, of great value to the whole interest.

Q. Of great necessity? A. Of great necessity—that we should thus have taken hold of it and put in the necessary capital not only to supply as needed those gathering lines, but to supply them promptly, and not to wait a day or two or three, as might have been the case in this inferior service previous to our taking hold of it in earnest, or our friends who were there engaged in the business, but to see to it that the oil was not lost; that when it came out of the ground, whether at day or night, our men should be there, should make the connections and save the oil. And then we went on with the necessary larger pipes to get it away to where it would find its market, its shipping point. And then the matter of the building of the tanks was an undertaking so great that we could not have expected to accomplish it had we undertaken to do it all at once. Conservative men in our connection never would have consented to make such large expenditures. So that we did not make one decision to construct the tanks which were necessary, but our men coming in from the fields would report from time to time the pressing necessity for additional five hundred thousand barrels of tankage, and as quickly as we could bring our conservative interests to agree we would say 'Go ahead.' It would be a very short time, indeed, before the men would come back again. And so step by step we continued building until million after million of barrels of tankage were constructed. It was an immense outlay of money.

"Q. That tankage took care of the oil? A. Otherwise the oil (much of it) would from time to time have wasted and run into Oil Creek and the Allegheny River. We saved it. It could not have been done under the system that was previously in vogue. There was not the capital there; there was not the organization there. It was a godsend to the region that we moved, and moved as they needed it, and moved boldly, and continued so long as the necessity existed."

3. The smaller existing pipe lines that were from time to time acquired and incorporated in the gathering system are enumerated in the testimony of Mr. Campbell and Mr. Hopkins (vol. 6, pp. 3319 and 3325). The pipe lines of the Empire Transportation Co., consisting of three or four hundred miles of pipe (Cassatt, vol. 20, p. 35), were acquired under the circumstances hereafter described and became a part of the system in 1877. The Columbia Conduit Co. had a pipe line, between forty and fifty miles long, that ran from the producing

fields to Pittsburg and was intended to carry oil to the refineries without rail transportation. It belonged to a Mr. Hostetter of Pittsburg and was built about 1874. The Standard Oil interests, prior to 1877, had acquired large refineries in Pittsburg, and a pipe line to Pittsburg was just the thing needed to supply oil to those refineries. Negotiations were entered into with Mr. Hostetter which resulted in the purchase of the Columbia Conduit line (J. D. Rockefeller, vol. 16, pp. 3095-6).

The various pipe lines constructed and acquired all went to the American Transfer Co. or the United Pipe Lines and eventually went into the National Transit system after the organization of that Company in 1881 (Def. Exs. 282, 271).

4. The capacity of all of the storage tanks in the oil regions in 1875 did not exceed at the outside three or four million barrels (Emery, vol. 6, p. 2740). In 1886 the stocks of crude oil for which storage had been provided by the Standard Oil pipe lines were nearly 36,000,000 bbls. (Pet. Ex. 958, vol. 21, p. 132). The Trunk lines at the time of the Trust Agreement comprised 1062.95 miles of pipe (Def. Ex. 261, vol. 19, p. 621), of which all except the 48 miles purchased from the Columbia Conduit Company had been created by the Standard Oil interests (J. D. Archbold, vol. 17, p. 3630). The gathering system included nearly 2500 miles of pipe (Def. Ex. 261). A large and assured volume of business was necessary to justify the owners of the Standard Oil Company in making these expenditures, while the protection of their existing investments made such expenditures necessary.

V. THE EMPIRE TRANSPORTATION COMPANY PROPERTIES.

THE PURCHASE OF THE REFINING INTERESTS AND THE PIPE LINES OF THE EMPIRE TRANSPORTATION COMPANY WAS NECESSARY TO PUT AN END TO A RUINOUS RATE WAR.

The Empire Transportation Company was a corporation which, through its relations with the Pennsylvania Railroad, had full control of the oil traffic over that road, owning all the tank cars and fixing the rates charged to shippers. It also owned three or four hundred miles of gathering lines (J. D. Rockefeller, vol. 16, pp. 3085-6 ; A. J. Cassatt, vol. 20, p. 35).

In 1877, the Empire Transportation Company entered ex-

tensively into the refining business. It acquired control of Sone & Fleming, a corporation having a refinery on Newtown Creek in New York, and the Philadelphia Refining Co. of Philadelphia (J. D. Rockefeller, vol. 16, pp. 3085-6). It was proceeding to enlarge the Sone & Fleming Works and to construct a refinery at Philadelphia and apparently was preparing to extend its operations to Pittsburg (Cassatt, vol. 20, p. 35).

The other oil carrying roads protested strongly against the Pennsylvania's engaging through the Empire Transportation Company in the refining business ; they asserted that such a course would give the Pennsylvania an advantage in obtaining traffic for its road that they would not submit to. The Standard Oil Company objected to having as a competitor in the refining business the Company to which it had to look for its allotment of cars and which in many other ways was in a position to discriminate against it (A. J. Cassatt, vol. 20, pp. 23-4). The Pennsylvania disregarded the protests of the other roads and the Standard ; a demoralizing rate war resulted and the Standard withdrew its shipments from the Pennsylvania. Negotiations for a settlement of the difficulty ultimately came about ; the Pennsylvania was willing to sever its connection with the refining business. To enable it to do so, the Standard loaned it sufficient money to buy the cars of the Empire Transportation Company and the Standard itself bought the Sone & Fleming Company and the Philadelphia refinery. It also bought, but very reluctantly and only upon the insistence of the Pennsylvania Railroad, the Empire Transportation Company's pipe lines (A. J. Cassatt, vol. 20, pp. 35-6 ; J. D. Rockefeller, vol. 16, pp. 3085-9). The Sone & Fleming Works are now one of the refineries of the Standard Oil Co. of New York, and the Philadelphia refinery forms part of the works of the Atlantic Refining Company (Def. Ex. 282).

VI. OTHER REFINING INTERESTS.

A NUMBER OF REFINERIES WERE PURCHASED DURING AND SUBSEQUENT TO 1875 FOR THE PURPOSE OF ESTABLISHING THE BUSINESS AT NEW POINTS OR ENLARGING THE REFINING CAPACITY AT POINTS WHERE IT WAS ALREADY ESTABLISHED.

In 1875 the refineries and business of Bennett, Warner & Co., and Porter, Moreland & Co., located at Titusville, in the

oil regions (J. D. Rockefeller, vol. 16, p. 3083) were purchased and vested in the Acme Oil Company (*id.*). In the same year the refineries of J. N. Camden & Co. and the Poole refinery at Parkersburg, W. Va., were purchased and were vested in the Camden Consolidated Oil Company (J. D. Rockefeller, vol. 16, p. 3091).

The Camden Consolidated Oil Co. became the owner, either by purchase or construction, of the Canton Oil Works at Baltimore (Def. Ex. 282, vol. 19, p. 673). Other works at Baltimore were purchased in 1877 and vested in the Baltimore United Oil Company (J. D. Archbold, vol. 17, p. 3356 ; Def. Ex. 282, *id.*). The greater part of the stock of the Central Refining Company of Pittsburg was purchased in 1876, and the balance subsequently acquired (J. D. Archbold, vol. 17, p. 3269). In June, 1877, the Standard Oil Company (of Ohio) purchased and had conveyed to it a refinery at Bayonne, N. J., on New York Harbor (J. D. Archbold, vol. 17, p. 3265 ; Def. Ex. 282, vol. 19, p. 673). The refining interests on New York Harbor were further extended by the acquisition in 1881 of a four-fifths interest in the Empire Refining Company, which had a refinery on Newtown Creek, and a half interest in the Bush & Denslow Company, which had a refinery in Brooklyn (J. D. Archbold, vol. 17, pp. 3269, 3275, 3358 & 3369. Def. Ex. 282, vol. 19, p. 673.)

The other refining properties acquired were of minor importance. The works of Pickering, Comfort & Chambers at Titusville were bought in 1876 and vested in the Keystone Refining Company (Archbold, vol. 17, pp. 3271-2 ; Def. Ex. 282, vol. 19, p. 673). The Diamond Works at Alleghany, Pa., were bought in 1879 and vested in Van Tine & Co. Ltd. (J. D. Archbold, vol. 17, p. 3278 ; Def. Ex. 282, vol. 19, p. 673). The stock of the Solar Oil Company, Ltd., which had a small refinery at Williamsport, Pa., was bought in 1880 (J. D. Archbold, vol. 17, p. 3263 ; Def. Ex. 282).

The works at Bayonne, N. J., have developed into the Bayonne Works of the Standard Oil Co. (New Jersey). The works at Baltimore and the works at Parkersburg have become the Baltimore and Parkersburg Works of the Standard Oil Co. (New Jersey). Through destruction by fire and process of consolidation the other works have disappeared.

VII. EXTENSION OF MARKETING BUSINESS.

THE STANDARD OIL MARKETING BUSINESS WAS NATURALLY EXPANDED AND DEVELOPED CONCURRENTLY WITH THE EXTENSION OF ITS REFINING INTERESTS.

1. In the West two companies were organized for the extension and development of the marketing business. In each case, the course followed was somewhat similar to that pursued when the business was extended into the southern States by the acquisition of an interest in the Chess-Carley Company. Alexander McDonald & Co. were a firm doing a marketing business with headquarters in Cincinnati. They bought their supplies largely from Standard Oil interests (J. D. Archbold, vol. 17, p. 3360). They sold oil in Southern Ohio. In 1878, Standard Oil interests and Alexander McDonald & Co. formed a corporation, the Consolidated Tank Line Company, with a capital of \$125,000, of which half was owned by the Standard Oil interests. This corporation extended its marketing business until its stations covered Southern Ohio, Illinois, Indiana and various States west of the Mississippi (Def. Ex. 282; J. D. Archbold, vol. 17, pp. 3270, 3361). Waters, Pierce & Company were a firm with headquarters at St. Louis, doing a marketing business in Missouri and the Southwest. In 1878 the Waters-Pierce Oil Co. was organized with a capital stock of \$100,000. of which 40 per cent. was taken by the Standard Oil interests and 20 per cent. by Chess, Carley & Co., and 40 per cent. by the members of the firm of Waters, Pierce & Co. This Company thereafter acted as the marketing agency of the Standard Oil Co. in eastern Missouri, Arkansas, Louisiana, Oklahoma and Texas. (J. D. Archbold, vol. 17, pp. 3279, 3632, 3643 ; Def. Exhibit 282). The Standard Oil Co. of Ohio established its own marketing stations in northern Ohio, Indiana, Illinois, Wisconsin, Minnesota, Michigan, the Rocky Mountain States and California. (Def. Exhibit 282)

2. In the New England States the Standard Oil interests acquired certain properties, the chief purpose in these acquisitions being the extension to those States of an effective marketing system. Carter, Windsor & Co. did business in New England under the firm name of the Maverick Oil Co., mar-

keting oils in Boston, and measurably through New England. They at one time had a refinery. (J. D. Archbold, vol. 17, p. 3363). A corporation under the name of the Maverick Oil Co. was organized in 1877 by the Standard Oil interests and the members of the firm of Carter, Windsor & Co., with a capital of \$100,000., the Standard Oil interests taking $\frac{7}{10}$ of the stock. (J. D. Archbold, vol. 17, p. 3272 : Def. Exhibit 282). The firm of Kidder, Vaughn & Co. were jobbers doing business in New England, with headquarters at Boston. They also at one time had a small refinery but their chief business was that of marketing oil. In 1879 the Beacon Oil Co. was organized by the Standard Oil interests and some of the members of the firm of Kidder, Vaughn & Co., and purchased the assets and goodwill of that firm. The capital was \$100,000. of which the Standard Oil interests took $\frac{7}{10}$ (J. D. Archbold, vol. 17, pp. 3357 & 3268). The Portland Kerosene Oil Co. was a company doing business in New England, with headquarters at Portland, Me. It had had a small refinery but its business was chiefly that of marketing oil. To a large extent the supplies for its business were bought from other refineries, chiefly the Standard Oil companies (J. D. Archbold, vol. 17, p. 3364). In 1878 the Standard Oil interests purchased 934 shares of the stock of this Company out of 2,000 shares (J. D. Archbold, vol. 17, p. 3364 ; Def. Exhibit 282). These three companies thereafter acted as the marketing agents of the Standard Oil interests in the New England States.

VIII. LUBRICATING OILS.

THE OWNERS OF THE STANDARD OIL BUSINESS IN 1877 OR 1878 FIRST TURNED THEIR ATTENTION TO THE MAKING OF LUBRICATING OILS, AND THEREAFTER ENTERED EXTENSIVELY INTO THE LUBRICATING FIELD WITH THE OBJECT OF UTILIZING THE RESIDUUM REMAINING AFTER THE DISTILLATION OF REFINED OILS FROM CRUDE PETROLEUM.

Lubricating oils are made to a large extent from the crude residuum remaining after the distillation of refined or illuminating oil. The manufacture of lubricating oils is, therefore, naturally closely affiliated with the refining business. The *American Lubricating Oil Co.* and the *Mica Axle Grease Co.*

were located in Cleveland and had plants adapted to the manufacture of lubricating oils, and some business. These two companies were purchased by the Standard Oil interests in 1877 or 1878, and their properties were vested in the American Lubricating Oil Co. This was a further diversification of the Standard Oil business, and one of the first important steps towards the utilization of its by-products. (J. D. Rockefeller, vol. 16, pp. 3083-3085). After the Standard Oil interests entered upon the policy of utilizing the crude residuum in the manufacture of lubricating oils, they repeatedly extended their interests in lubricating properties until these were commensurate with the amount of the residuum to be utilized. The chief lubricating plants acquired after the acquisition of the American Lubricating Oil Co. were those of the Eclipse Lubricating Oil Co. (1878), the Galena Oil Works (1879) and the Signal Oil Works (1879), the works of Paine, Ablett & Co. (1878) and the Vacuum Oil Co. (1879) (J. D. Archbold, vol. 17, pp. 3353, 3466 & 3467).

Paine, Ablett & Co. were a firm engaged in making lubricating oil at Smith's Ferry, Pa. Their business was bought out by the Standard Oil interests in 1878 and vested in the limited partnership of Paine, Ablett & Co. The Eclipse works at Franklin, Pa., had been constructed by a large number of individuals for the purpose of manufacturing lubricating oils. They had been built on quite an extensive scale but had been unsuccessful, and prior to 1878 had ceased operations (J. D. Archbold, vol. 17, pp. 3368-3369). In 1878 they were purchased by Standard Oil interests and vested in the *Eclipse Lubricating Oil Co.* The *Galena Oil Works* and the *Signal Oil Works*, also at Franklin, were associated enterprises. The business of the Signal Works was the compounding of signal and cylinder oils; and that of the Galena the manufacture and sale of lubricating oils. The products of both were especially adapted for the use of railroads, and they were doing a business quite distinct from anything that the Standard Oil interests had theretofore done, the oils of these companies being recognized as specialties having a special field of their own. (J. D. Archbold, vol. 17, pp. 3366-3367). In 1879 the Standard Oil interests purchased something over a three-fourths interest in the Galena Oil Works, and by this pur-

chase also acquired a minority interest in the Signal Oil Works. (Def. Exhibit 282). The works of the *Vacuum Oil Co.* were at Rochester, N. Y. The Company made special brands of lubricating oil adapted to special purposes. Their oils were different from those made by the Galena-Signal Companies and were for the most part suited to the needs of a special trade. (J. D. Archbold, vol. 17, pp. 3370-3371). In 1879 the Standard Oil interests purchased a three-fourths interest in the Vacuum Oil Co.

IX. MARKETING FACILITIES FOR LUBRICATING OIL.

THE DEVELOPMENT OF THE MARKETING BUSINESS FOR LUBRICATION OIL NATURALLY FOLLOWED THE ACQUISITION OF INTERESTS IN THE MANUFACTURING END OF THE BUSINESS.

Thompson, Bedford & Co. were extensive dealers in lubricating oils, both in the domestic and export trades. They were not in the manufacturing business, confining themselves to dealing in and marketing lubricating oils. (J. D. Archbold, vol. 17, pp. 3367-3368). In 1878 the Standard Oil interests acquired a half interest in the business of Thompson, Bedford & Co. (Def. Exhibit 282). *Swan & Finch* was also engaged in the business of marketing lubricating oils in New York, and a half interest in this firm was acquired by the Standard Oil interests about 1880 (J. D. Archbold, vol. 17, p. 3395). *Bush & Co., Ltd.*, was a small company in Philadelphia apparently engaged in business somewhat similar to that of Swan & Finch. This Company was acquired as a marketing agency in 1880 (J. D. Archbold, vol. 17, pp. 3352-3353 ; Def. Exhibit 282). *Miller & Hamilton* were engaged in marketing lubricating oils, having their headquarters at Cincinnati. The *Inland Oil Co.* was organized about 1880 ; half of the stock was taken by the Standard Oil interests and the Company purchased the business of Miller & Hamilton (J. D. Archbold, vol. 17, p. 3361).

X. MISCELLANEOUS ACQUISITIONS.

SOME MISCELLANEOUS ACQUISITIONS WERE MADE BY THE OWNERS OF THE STANDARD OIL BUSINESS PRIOR TO 1882 HAVING IN VIEW THE UTILIZATION OF THE WASTE PRODUCTS OR THE EFFECTING OF ECONOMIES IN THE BUSINESS, OR OTHER PURPOSES HAVING TO DO WITH THE PROMOTION AND WELFARE OF THE BUSINESS.

One of the most widely used by-products of petroleum is vaseline (J. D. Archbold, vol. 17, pp. 3359). *The Chesebrough Manufacturing Co.* was an extensive manufacturer and marketer of vaseline and vaseline products. The Standard Oil interests were not making vaseline but were in a position to supply to an unlimited extent the material constituting the base of its manufacture, to wit: the residuum from the refining processes. In 1881 the Standard Oil interests purchased a majority of the stock of the Chesebrough Manufacturing Co. (J. D. Archbold, vol. 17, p. 3359). The *Elizabethport Acid Works* was organized by the Standard Oil interests in 1879 to build works at Elizabeth, N. J., for restoring spent acid so that it might again be used in the refining processes (Def. Ex. 282). The stock of the *National Storage Co.* was acquired by the National Transit Company at the time of its organization in 1881. A majority of the stock of the *Producers' Consolidated Land & Petroleum Company* was purchased in the fall of 1877. This was a producing company. The *Germania Mining Company* was organized to develop some small producing properties. The *Smith's Ferry Oil Transportation Company* was acquired as part of the assets of Paine, Ablett & Co. It owned a small gathering line near Smith's Ferry. A small minority of the stock of the *Franklin Pipe Line Company* was acquired in 1881. It owned a gathering line near Franklin.

XI. ACQUISITIONS WERE ONLY INCIDENTAL TO EXPANSION OF BUSINESS AS A WHOLE.

While the properties acquired by the owners of the Standard Oil business prior to 1882 were extensive and important, the acquisition of them was merely incidental to the expansion and development of the business as a whole. Prior to 1882

properties already in existence were frequently acquired because it was more economical to purchase such properties than to create new ones, but the process of extension and development went on without interruption. Each of the acquisitions at once took its place in the development of the entire scheme of the business, and many of the properties acquired were so added to and enlarged that to all intents and purposes they were creations of the Standard Oil interests.

The capacity of the refineries of the Standard Oil interests had been enlarged to such an extent that in 1882 they consumed 16,500,000 barrels of oil, that is to say, consumed an amount more than three times as great as the total production of crude oil in 1870, and nearly twice as much as the total production of crude oil in 1876. The appraised valuation of the various manufacturing plants was \$17,000,000 (J. D. Archbold, vol. 17, p. 3252).

The Acme Oil Company had constructed a great plant at Olean, New York (Pet. Ex. 250, vol. 7, p. 423). The construction of the Eagle Works at Communipaw on New York Harbour had been begun (Def. Ex. 282, 272 & 271, vol. 19, pp. 673, 644 & 633). The cost of real estate and construction at the Bayonne Works and the Communipaw Works already amounted to two million and a half dollars (J. D. Archbold, vol. 17, pp. 3291-2 ; Def. Ex. 282 & 271 *id.*). The works at different refining points had been consolidated, modernized, enlarged and improved so that the works at each place could be operated as an efficient unit (J. D. Rockefeller, vol 16, pp. 3139 & 3161). Minor works which had been purchased from time to time for the sake of the goodwill attaching to them had been consolidated with larger works so that the demands of their trade could be met from modern, well equipped and centrally located works (J. D. Archbold, vol. 17, pp. 3324, 3335). The refining business owned by Standard Oil interests as a whole had been unified and each plant developed with a view to the supply of the trade which from its location or for other reasons it was best adapted to supply (J. D. Archbold, vol. 17, p. 3467).

THIRD. The ownership of the Standard Oil properties down to the time of the Trust Agreement of 1882.

The stock of the Standard Oil Co. (of Ohio) was increased from \$1,000,000. to \$2,500,000. in 1872. In 1875 it was further increased to \$3,500,000. It has ever since stood at that figure. (Def. Ex. 387, Vol. 19, p. 890). Prior to the increase of 1872 the stock was held by J. D. Rockefeller, O. B. Jennings, B. Brewster, Wm. Rockefeller, S. V. Harkness, H. M. Flagler, S. B. Handy, Samuel Andrews, A. Stone Jr. and S. Witt. (Def. Ex. 387, Vol. 19, p. 890). In March, 1875, there were thirty stockholders. (vol. 19, p. 893). On April 8, 1879, the number of stockholders had increased to thirty-seven. On January 1, 1882, there were forty-one stockholders. The names of the stockholders and the amounts held by them respectively are shown in Def. Ex. 386 (vol. 19, p. 889).

All of the properties acquired in the course of the development and expansion of the Standard Oil business were paid for with the common moneys of the stockholders of the Standard Oil Co. (of Ohio) and were held for their account.

I. UNTIL THE 8TH DAY OF APRIL, 1879, ALL THE PROPERTIES ACQUIRED WERE PAID FOR BY THE STANDARD OIL CO. (OF OHIO). THE PROPERTIES WERE EITHER CONVEYED TO THE STANDARD OIL CO. (OF OHIO) OR THE STOCKS REPRESENTING THEM WERE TRANSFERRED OR ISSUED TO INDIVIDUALS TO BE HELD BY THEM AS TRUSTEES FOR THE BENEFIT OF THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO) ACCORDING TO THEIR PROPORTIONATE INTERESTS IN THAT COMPANY.

1. The refineries of Clark, Paine & Co., Alexander Scofield, & Co., and the other refineries acquired at Cleveland, were conveyed direct to the Standard Oil Co. (of Ohio). (J. D. Rockefeller, vol. 16, p. 3161). The refinery at Bayonne, N. J., purchased in 1877 from the Producers' Consolidated Land & Petroleum Co. was also conveyed direct to the Standard Oil Company (of Ohio) and was held by it down to the time of the Trust Agreement of 1882 (Def. Ex. 282). The properties on Long Island and in New York City which had belonged to the

Long Island Refining Co. were leased about 1873 to the Standard Oil Co. (of Ohio), and eventually were conveyed to it in fee, the Long Island Refining Co. ceasing to exist as a separate corporate organization (Def. Ex. 282).

2. Properties acquired by Standard Oil interests and not conveyed directly to the Standard Oil Company (of Ohio) were vested in corporations, limited partnerships or other organizations, of which all of the shares or a great part of the shares were held for the common account of the stockholders of the Standard Oil Company. Twenty-one of the corporations and limited partnerships named in the Trust Agreement had been organized in the interest of the Standard Oil Company stockholders, the whole or a great part of the original stock in each instance being taken for their account. The other companies named in the Trust Agreement were companies of which the stock in whole or in part had been purchased for their account (Def. Ex. 282). *In all instances prior to April 8, 1879, whether the acquisition took the form of the purchase of the stock of an existing company or took the form of a subscription to the stock of a newly organized company formed to take over properties acquired, payment for the stock was made from the treasury of the Standard Oil Co. (of Ohio).* (Mr. Rockefeller, vol. 16, p. 3096). In 1875 and prior thereto payment in some cases was made with stock of the Standard Oil Co. (of Ohio) (J. D. Rockefeller, vol. 16, pp. 3151, 3153 & 3166). After 1875 substantially all of the purchases were paid for in cash (J. D. Archbold, vol. 17, p. 3259). In all cases, however, whether paid for with stock or in cash, the consideration came from the Standard Oil Co. (of Ohio).

3. *The stocks, whether purchased or acquired by subscription, were transferred or issued to individuals to be held by them as trustees for the stockholders of the Standard Oil Co. (of Ohio).* (J. D. Rockefeller, vol. 16, p. 3097.) On March 31, 1875, the entire capital stock of Charles Pratt & Co. less qualifying shares was transferred on the books of that Company to H. M. Flagler, Secretary, Trustee, and stood in his name until it was transferred to Vilas, Keith & Chester, trustees, in 1879, in accordance with the plan hereafter described (Def. Exhibit 313, vol. 19, p. 742). On May 12, 1875, the entire capital stock of the Atlantic Refining Co. less qualifying shares was transferred on the books of the Company to H. M.

Flagler in trust, and likewise stood in his name until the transfer to Vilas, Keith & Chester in 1879 (Def. Exhibit 311, vol. 19, p. 734). All the stock of the Long Island Oil Co. less qualifying shares was transferred to H. M. Flagler in trust, between February 27, 1873, and February 24, 1875. He transferred most of it to William Rockefeller, who held it until the transfer to Vilas, Keith & Chester in 1879 (Def. Exhibit 342, vol. 19, p. 821). The stock of the Standard Oil Co. of Pittsburg was held by H. M. Flagler in trust (Def. Exhibit 315, vol. 19, p. 747). Stock of the Sone & Fleming Manufacturing Co., Ltd., was held by H. M. Flagler, Trustee (Def. Exhibit 317, vol. 19, p. 747). The stock of the Devoe Manufacturing Co. was held by J. A. Bostwick, trustee, by H. M. Flagler in trust, and by William Rockefeller (Def. Exhibit 332, vol. 19, p. 792). The stock of the Central Refining Co. of Pittsburg was held by Wm. G. Warden, trustee, and by Charles Lockhart, trustee (Def. Exhibit 332, vol. 19, p. 792). Stock of the Model Refining Co. was held by H. M. Flagler, trustee (Def. Exhibit 340, vol. 19, p. 815). 14,500 shares of the Producers' Consolidated Land & Petroleum Co. stock was transferred on the books of the Company in October and November, 1877, to George F. Chester, Joel Freeman and Daniel O'Day (Def. Exhibit 329, vol. 19, p. 774; J. D. Archbold, vol. 17, p. 3641). The parties named in each instance held the stock standing in their names as trustees for the stockholders of the Standard Oil Co. (of Ohio) (J. D. Archbold, vol. 17, p. 3636 *et seq.*) and the qualifying shares likewise were held for the same interests (*id.*).

The *Acme Oil Co.* was organized in 1875 to take over the properties of Porter, Moreland & Co., and Bennett, Warner & Co. The original stockholders were J. D. Archbold who held 375 shares, A. P. Bennett 375 shares, Wm. Rockefeller 1590 shares, Charles Pratt & Co. 350 shares, Warden, Frew & Co. 330 shares; Wm. Rockefeller, Charles Pratt & Co. and Warden, Frew & Co. subscribed for and held their stock for the stockholders of the Standard Oil Co. (J. D. Rockefeller, vol. 16, pp. 3633, 3170-3171; Def. Exhibit 306, vol. 19, p. 719). The stock held by Mr. John D. Archbold and Mr. Bennett was acquired prior to April, 1879 (J. D. Archbold, vol. 17, p. 3344; Def. Exhibit 306). The *Baltimore United Oil Co.* was organized December 14, 1877. Its authorized

stock was \$600,000, divided into 6000 shares. Johnson N. Camden, trustee, held 5024 of the 5059 shares issued to him, for account of the stockholders of the Standard Oil Co. (J. D. Archbold, vol. 17, p. 3639 : Def. Exhibit 319, vol. 19, p. 752). The *Camden Consolidated Oil Co.* was organized on May 21, 1875, with a capital stock of 4000 shares. The stock, except qualifying shares, was all subscribed for by J. N. Camden, Wm. P. Thompson and Wm. Chancellor, all of whom subscribed for said stock for account of the stockholders of the Standard Oil Co. (J. D. Archbold, vol. 17, p. 3639 : Def. Exhibit 309). The *Consolidated Tank Line Co.* was incorporated January 17, 1878, half of the stock being subscribed for, taken and held by O. H. Payne, H. A. Hutchins and George H. Vilas, for account of the stockholders of the Standard Oil Co. (of Ohio). (Def. Exhibits 325 and 325-A, vol. 19, pp. 763-764 : J. D. Archbold, vol. 17, p. 3640.) *Paine, Ablett & Co.* was organized October 1, 1878. All of the stock excepting qualifying shares was held by A. M. McGregor and F. Q. Barstow, all being held for account of the stockholders of the Standard Oil Co. (of Ohio) (Def. Exhibits 314 and 314-A, vol. 19, pp. 742-743 : J. D. Archbold, vol. 17, p. 3637). When the *Imperial Refinery* was purchased in 1874 the title to the property was at first vested in individuals as trustees for the Standard Oil interests. (J. D. Rockefeller, vol. 16, p. 3079.) In 1878 the *Imperial Refining Co., Ltd.*, was organized under the laws of Pennsylvania and the property was conveyed to that Company in full payment for the subscription to its entire capital stock. The subscribers to the stock were J. J. Vandergrift, Duncan McIntosh, J. D. Archbold, F. Q. Barstow and A. M. McGregor. All of the five subscribers were acting on behalf of the stockholders of the Standard Oil Co. (of Ohio) and the entire stock was held for their account. (Def. Exhibit 313, vol. 19, p. 742 : J. D. Archbold, vol. 17, p. 3636.) On the organization of the *American Lubricating Oil Co.* three-fourths of its stock was subscribed for by A. M. McGregor, George I. Vail, L. H. Severance and O. H. Payne, who subscribed for and held the stock for the Standard Oil shareholders. (J. D. Archbold, vol. 17, p. 3638 : Exhibit 318, vol. 19, p. 748). In 1878 the stock was increased from \$100,000 to \$200,000, and the additional stock was apparently all taken for account of the

Standard Oil shareholders (Def. Exhibit 318). Three of the five incorporators of the *Beacon Oil Co.* were George F. Chester, John D. Archbold and Fred Mohr, Jr., all of whom represented the stockholders of the Standard Oil Co. (Def. Exhibit 320, vol. 19, p. 756). Among the subscribers to the original capital stock of the *Maverick Oil Co.* were J. D. Archbold and George F. Chester, who represented the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3641 : Def. Exhibit 327, vol. 19, p. 773). The 525 shares out of 750 shares of the *Keystone Refining Co.* were immediately, upon the organization of that Company, assigned to Charles Pratt and Wm. G. Warden, who held the stock so assigned for the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3640 : Def. Exhibit 326, vol. 19, p. 769). The holders of the capital stock of the *Galena Oil Works, Ltd.*, included F. Q. Barstow, J. D. Archbold, J. J. Vandergrift and Duncan McIntosh, who in subscribing for and holding their stock acted for the stockholders of the Standard Oil Co. (J. D. Archbold, vol. 17, p. 3642 : Def. Exhibit 336, vol. 19, p. 800). John D. Archbold, F. Q. Barstow and D. McIntosh held 62 out of 160 shares of the Signal Oil Works, Ltd., for account of the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3641 : Def. Exhibit 330, vol. 19, p. 775). John D. Archbold, F. Q. Barstow, A. M. McGregor and Charles Pratt subscribed for \$145,000 out of \$175,000 capital stock of the *Eclipse Lubricating Oil Co., Ltd.* In subscribing for and holding this stock, they acted for the shareholders of the Standard Oil Co. (J. D. Archbold, vol. 17, p. 3642 : Def. Exhibit 333, vol. 19, p. 793). J. D. Archbold and F. Q. Barstow subscribed for \$75,000 out of the \$100,000 of stock of H. C. Van Tine & Co., and such stock was subscribed for and held by them for account of the shareholders of the Standard Oil Company (J. D. Archbold, vol. 17, p. 3643 ; Def. Ex. 338, vol. 19, p. 805). Of the 1000 shares of stock of the *Waters-Pierce Oil Co.* originally issued, 400 shares were issued to H. A. Hutchins, who represented the Standard Oil shareholders, and 200 shares were issued to Chess-Carley & Co. (Mr. Archbold, vol. 17, p. 3643 ; Def. Exs. 339 & 339-A, vol. 19, pp. 808-9).

The United Pipe Lines was organized in 1877, and in that year or shortly thereafter, all of the Standard Oil pipe line

interests were vested in the American Transfer Company, of which all the stock was held for the account of the Standard Oil stockholders, or in the United Pipe Lines (Mr. Rockefeller, vol. 16, pp. 3092-3). Out of the 50,000 shares constituting the issue of stock of the United Pipe Lines, 11,644 were issued to J. J. Vandergrift, Trustee, 2,985 shares were issued to Daniel O'Day and 27,021 shares to H. M. Flagler. One-third of the stock issued to J. J. Vandergrift, Trustee, and all of that issued to O'Day and Flagler, were held for the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3644; Def. Ex. 341-A, vol. 19, p. 820).

II. PROPERTIES HELD APRIL 8TH, 1879.

THE VARIOUS PROPERTIES ACQUIRED FOR ACCOUNT OF THE STOCKHOLDERS OF THE STANDARD OIL CO. PRIOR TO APRIL 8, 1879, WHICH WERE REPRESENTED ON THAT DATE EITHER BY THE STOCK OF THE STANDARD OIL CO. OR BY STOCKS AND INTERESTS HELD IN TRUST FOR ITS STOCKHOLDERS, COMPRISED ALL THE ESSENTIAL FACTORS IN THE STANDARD OIL BUSINESS REPRESENTED BY THE STOCKS AND INTERESTS NAMED IN THE TRUST AGREEMENT OF 1882.

The essential identity of the Standard Oil interests in 1879 and 1882 can be best shown in the form of a table :

TABLE NUMBER 1.

Owned in whole or in part by Standard Oil Interests in 1882			Owned in whole or in part by or for account of stockholders of Standard Oil Co. (of Ohio) April 8, 1879.		
Companies named in Trust Agreement.	Total Stock	Proportion Owned.	Corresponding Companies in 1879.	Proportion Owned	Date Acquired
Acme Oil Co. of New York	3000 Shares	All	Acme Oil Co. of New York which owned properties afterwards owned by Acme of Pennsylvania.	All	1875
Acme Oil Co. of Pennsylvania	3000 Shares	"	Acme Oil Co. of New York which owned properties afterwards owned by Acme of Pennsylvania.	All	1874
Atlantic Refining Co. of Philadelphia.	4000 Shares	"	Atlantic Ref. Co. Philadelphia Refining Co.	All	1877

Owned in whole or in part by Standard Oil Interests in 1882.			Owned in whole or in part by or for account of stockholders of Standard Oil Co. (of Ohio) April 8, 1879.		
Companies named in Trust Agreement.	Total Stock.	Proportion Owned.	Corresponding Companies in 1879.	Proportion Owned.	Date Acquired
Bush & Co., Ltd.	150 Shares	All			1880
Camden Consolidated Oil Co.	4000 Shares	"	Camden Consolidated Oil Co.	All	1876
Elizabethport Acid Works	280	"			1880
Imperial Refining Co.	3000 Shares	"	Imperial Refining Co.	All	1874
Charles Pratt & Co.	5000 Shares	"	Charles Pratt & Co.	All	1874
Paine, Ablett & Co.	500 Shares	"	Paine, Ablett & Co.	All	1878
Standard Oil Co. (of Ohio)	35000 Shares	"	Standard Oil Co. (of Ohio)	All	
			Long Island Oil Co.	All	1873
Standard Oil Co. (of Pittsburg)	3000 Shares	"	Standard Oil Co. (of Pittsburg)	All	1874
Smith's Ferry Oil Transportation Co.	200 Shares	"	Model Oil Co.	All	1874
Solar Oil Co., Ltd.	1000 Shares	"	Smith's Ferry Oil Transportation Co.	All	1878
Sone & Fleming Mfg. Co., Ltd.	2500 Shares	"	Sone & Fleming Mfg. Co.	All	1877
American Lubricating Oil Co.	2000 Shares	1775/2000	American Lubricating Oil Co.	1775/2000	1878
Baltimore United Oil Co.	6000 Shares	5024/6000	Baltimore United Oil Co.	5024/6000	1877
Beacon Oil Co.	1000 Shares	7/10			1879
Bush & Denslow Mfg. Co.	3000 Shares	1/2			1881
Central Refining Co. Pittsburg	2553 Shares	2268/2553	Central Refining Co. Pittsburg	2268/2553	1876
Chesebrough Mfg. Co.	5000 Shares	2549/5000			1881
Chess, Charley & Co.	6000	1/2	Firm of Chess, Charley & Co.	1/2	1873
Consolidated Tank Line Co.	1250 Shares	1/2	Consolidated Tank Line Co.	1/2	1878
Inland Oil Co.	500 Shares	1/2			1880
Keystone Refining Co.	750 Shares	525/750	Keystone Refining Co.	525/750	1876
Maverick Oil Co.	1000 Shares	7/10	Maverick Oil Co.	7/10	1877

Owned in whole or in part by Standard Oil Interests in 1882.

Owned in whole or in part by or for account of stockholders of Standard Oil Co. (of Ohio) April 8, 1879.

Companies named in Trust Agreement.	Total Stock.	Proportion Owned.	Corresponding Companies in 1879.	Proportion Owned.	Date Acquired
National Transit Co.	588000 Shares	503/588	American Transfer Co. United Pipe Lines Columbia Conduit Co.	All 4159/5000	1873 1874/8
Portland Kerosene Oil Co.	2000 Shares	934/2000			1877
Producers' Consolidated Land & Petroleum Co.	10000 Shares	6513½/10000	Producers' Consolidated Land & Petroleum Co.	14713/25000	1877
Galena Oil Works, Ltd.	6000 Shares	4650/6000	Galena Oil Wks. which owned properties of Galena Farms Oil Co. Ltd. & interest in Signal Oil Works.	7/8	1879
Signal Oil Works, Ltd.	160 Shares	31/80			
Galena Farms Oil Co., Ltd.	1000 Shares	155/200			
Thompson & Bedford Co., Ltd.	2500 Shares	4/5	Firm of Thompson & Bedford Co.	1/2	1878
Devoe Mfg. Co.	3000 Shares	9/10	Devoe Mfg. Co.	9/10	1873
Eclipse Lubricating Oil Co., Ltd.	3500 Sharcs	32/35	Eclipse Lubricating Oil Co., Ltd.	29/35	1878
Empire Refining Co., Ltd.	1000 Sharcs	4/5			1881
Franklin Pipe Line Co.	500 Shares	19/100			1881
Germania Mining Co.	300 Shares	29/30			1880
Vacuum Oil Co.	100 Shares	3/4			1879
H. C. Van Tine & Co., Ltd.	1000 Shares	3/4	H. C. Van Tine & Co., Ltd.	3/4	1879
Waters-Pierce Oil Co.	1000 Shares	2/5	Waters-Pierce Oil Co.	2/5	1878

References : Defendants' Exhibits 282, 257, 270, 306, 311, 313, 314, 315, 316, 317, 318, 319, 322, 325, 326, 327, 329, 339, 340, 341 ; Mr. Archbold, Vol. 17, pp. 3632-3644.

III. THE VILAS, KEITH & CHESTER AGREEMENT.

ON APRIL 8, 1879, ALL OF THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO) AND THE INDIVIDUALS IN WHOSE NAMES THE STOCKS AND INTERESTS THERETOFORE ACQUIRED AND HELD FOR THEIR BENEFIT STOOD, AND THE STANDARD OIL CO. (OF OHIO) ITSELF EXECUTED AN INSTRUMENT EVIDENCING THE RIGHTS OF THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO) TO SAID STOCKS AND INTERESTS, AND TRANSFERRING THE SAME TO VILAS, KEITH & CHESTER FOR THEIR BENEFIT, AND SAID STOCKS WERE TRANSFERRED ON THE BOOKS OF THE RESPECTIVE COMPANIES TO VILAS, KEITH & CHESTER, TRUSTEES.

On April 8th, 1879, the Standard Oil Company, which had the physical possession of the certificates of stock held for account of its shareholders (J. D. Rockefeller, vol. 16, pp. 3096-7), together with each of the stockholders of the Standard Oil Company and each of the persons in whose names the stocks held for their account stood, joined in the execution of the following instrument, the original of which with all the original signatures thereto has been put in evidence on behalf of the defendants (J. D. Rockefeller, vol. 16, pp. 3097-8; Def. Ex. 257, vol. 19, p. 618) :

"Whereas, the Standard Oil Company, of Cleveland, Ohio, holds the possession of certificates for certain stocks and interests which it is desirable to distribute among the parties entitled thereto ; and, whereas such stocks and interests now stand in the names of several persons, and it is desirable for convenience in dividing them that all be transferred to trustees, and that the same be so transferred by the Standard Oil Company, by each party holding the same and by every person holding or claiming an interest therein.

Now, in consideration of the foregoing, and of the sum of one dollar to us paid, and other considerations satisfactory to us, we, the undersigned, hereby grant, assign, transfer and convey all our right, title and interests and all the right, title and interest of each and every one of us of whatever name and nature in and to all and singular the following described stocks and interests, to wit :

Entire capital stock of Long Island Oil Company.

2,700 shares capital stock of Devoe Manufacturing Co.

Entire capital stock of Charles Pratt & Co.

5,059 shares capital stock of Baltimore United Oil Co.

525 shares capital stock of Keystone Refining Co.

Entire capital stock of Sone & Fleming Manufacturing Co.
Ltd.

Entire capital stock of Atlantic Refining Co.

Entire capital stock of Standard Oil Co. (of Pennsylvania.)
Entire capital stock of Model Oil Co.

1,775 shares capital stock of American Lubricating Oil Co.

Entire capital stock of Camden Consolidated Oil Co.

2,268 shares capital stock of Central Refining Co.

700 shares capital stock of Maverick Oil Co.

Entire capital stock of Republic Refining Co.

400 shares capital stock of Waters-Pierce Oil Co.

300 shares capital stock of Consolidated Tank Line Co.

Entire capital stock of American Transfer Co.

41,590 shares capital stock of United Pipe Lines.

Entire interest in and capital stock of Paine, Ablett & Co.

Ltd.

145,175ths of entire interest in and capital stock of Eclipse Lubricating Oil Co., Limited.

$\frac{3}{4}$ ths of entire interest and capital stock of H. C. Van Tine & Co., Limited.

$\frac{1}{3}$ ths of entire interest in and capital stock of Galena Oil Works, Limited.

Entire capital stock of Smith's Ferry Oil Transpn. Co.

14,713 (old) shares stock and interest in Producers' Consolidated Land & Petroleum Co.

Special Investment at Oil City, Pa.

Business and property of Star Oil Co., Erie, Pa.

do do of Warden, Frew & Co., Phila., Pa.

Entire capital stock of Philadelphia Refining Co.

Entire capital stock of Olean Petroleum Co., Limited.

Entire capital stock of Columbia Conduit Co.

and also all other interests of every kind and description held by the Standard Oil Co., or in which it has an interest which can be or by right ought to be divided and distributed among the parties entitled thereto, without affecting its proper, legitimate, and efficient operations as a corporation, to Myron R. Keith, George F. Chester and George H. Vilas, as trustees, to have and to hold said stocks and interest to them and their survivors and successors, in trust nevertheless for the following purposes, to wit: To hold, control and manage the said stocks and interests for the exclusive use and benefit of the following named persons and in the following proportions named:

Charles Pratt.....	2700/35000	thereof
Horace A. Pratt.....	15/35000	"
Henry H. Rogers.....	910/35000	"
C. M. Pratt.....	200/35000	"
Wm. Rockefeller.....	1600/35000	"
O. B. Jennings	818/35000	"
W. H. Macy	59/35000	"
W. H. Macy, Jr.....	28/35000	"
Estate of Josiah Macy.....	892/35000	"
A. J. Pouch.....	178/35000	"
J. A. Bostwick.....	1872/35000	"
Warden Frew & Co.....	485/35000	"
Chas. Lockhart.....	1408/35000	"
Wm. C. Warden.....	1292/35000	"
O. H. Payne, Trustee.....	61/35000	"
S. V. Harkness.....	2925/35000	"
H. M. Flagler.....	3000/35000	"
Daniel Bushnell.....	97/35000	"
Jos. L. Warden.....	98/35000	"
J. J. Vandergrift.....	500/35000	"
F. A. Arter.....	35/35000	"
Gustave Heye.....	178/35000	"
L. G. Harkness.....	178/35000	"
Hanna & Chapin.....	263/35000	"
A. M. McGregor.....	118/35000	"
B. Brewster.....	409/35000	"
W. C. Andrews.....	990/35000	"
Horace A. Hutchins.....	111/35000	"
John D. Archbold.....	350/35000	"
John D. Rockefeller.....	8984/35000	"
J. N. Camden.....	200/35000	"
W. P. Thompson.....	132/35000	"
D. M. Harkness.....	323/35000	"
O. H. Payne.....	2637/35000	"
John Huntington.....	584/35000	"
W. T. Wardwell.....	78/35000	"
H. W. Payne.....	292/35000	"

and to divide and distribute the same as soon as they can conveniently do so between the said persons for whose benefit they hold the same as aforesaid, and in the respective proportions aforesaid; with full power and authority to the survivors of the said trustees in case of the death of either of them to nominate and appoint a successor to such deceased trustee if they shall think it expedient so to do or else to continue the said trust without filling such vacancy.

In witness whereof the said Standard Oil Co. has by its president and secretary duly authorized thereto set its name

and affixed its corporate seal, and the others of the undersigned have hereto set their hands and seals this eighth day of April, A. D. 1879."

The persons named in the body of the instrument among whom, by its terms, the various stocks described were to be distributed were stockholders and were all the stockholders of the Standard Oil Co. (of Ohio). The proportions of the stocks described, to which, by the terms of the instrument, they are declared to be entitled, were the proportions in which they respectively held the stock of the Standard Oil Co. (of Ohio) (J. D. Rockefeller, vol. 16, pp. 3097-3098 : Def. Exhibit 386).

The reason for the execution of the instrument, as stated by Mr. Archbold, was—

“ It seemed that it was a simple method to hold the interest that had been acquired for this common ownership ” (vol. 17, p. 3258).

Mr. Rockefeller says :

“ It was made for the purpose of holding for the benefit of these individuals for whom these interests had been acquired, the properties in the form that seemed the most feasible ” (vol. 16, p. 3175).

The stocks described in the Vilas, Keith & Chester agreement, and all other stocks which had theretofore been held for Standard Oil interests, were, upon the execution of that agreement, transferred on the books of the several companies to Vilas, Keith & Chester, trustees (Atlantic Refining Co., Def. Exhibit 311, vol. 19, p. 734 ; Acme Oil Co., Def. Exhibit 307, p. 720 ; Chas. Pratt & Co., Def. Exhibit 313, p. 742 ; Standard Oil Co., Pittsburg, Def. Exhibit 315, p. 747 ; Smith's Ferry Oil Transportation Co., Def. Exhibit 316, p. 747 ; Sone & Fleming Mfg. Co., Def. Exhibit 317, p. 747 ; Baltimore United Oil Co., Def. Exhibit 319, p. 752 ; Central Refining Co. of Pittsburg, Def. Exhibit 322, p. 757 ; Consolidated Tank Line Co., Def. Exhibit 325, p. 763 ; Keystone Refining Co., Def. Exhibit 326, p. 769 ; Devoe Mfg. Co., Def. Exhibit 322, p. 757 ; Waters-Pierce Oil Co., Def. Exhibit 339, p. 808.

The stocks transferred to Vilas, Keith & Chester, Trustees, were not divided but were held by them until the Trust Agree-

ment of 1882 (J. D. Rockefeller, vol. 16, p. 3178). At all times each stockholder of the Standard Oil Co. of Ohio had the same proportionate interest in these stocks that he had in the stock of the Standard Oil Company (J. D. Rockefeller, vol. 16, p. 3180).

IV. THE PERIOD COVERED BY THE VILAS, KEITH & CHESTER AGREEMENT.

ACQUISITIONS MADE SUBSEQUENT TO THE VILAS, KEITH & CHESTER AGREEMENT WERE PAID FOR EITHER BY THE STANDARD OIL COMPANY (OF OHIO) OR BY ONE OF THE COMPANIES WHOSE STOCKS WERE HELD BY VILAS, KEITH & CHESTER, AND THE STOCKS REPRESENTING SUCH ACQUISITIONS WERE EITHER TRANSFERRED TO VILAS, KEITH & CHESTER OR PUT INTO THEIR CUSTODY AND WERE HELD FOR THE PROPORTIONATE BENEFIT OF THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO). VARIOUS CHANGES IN ORGANIZATION WERE EFFECTED FOR THE BETTER SYSTEMATIZATION OF THE BUSINESS, AND THE BUSINESS AS A WHOLE REPRESENTED BY THE STOCK OF THE STANDARD OIL CO (OF OHIO) AND THE STOCKS HELD BY VILAS, KEITH & CHESTER WAS MANAGED FOR THE COMMON BENEFIT OF ITS COMMON OWNERS, THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO).

1. Mr. Archbold testifies as follows :

" I should say that up to about 1880 the energies had been extended to the acquisition of properties at the various points —the acquisition and creation of properties at the various points where it was thought the refining business could be most advantageously done as to economy with reference to the supply of crude, the supply of all the materials that entered into the manufacture and the distribution of the products. At about that time there began to be felt the necessity of a more thorough unification of the interests, so that the administration of them might result in having each unit do the business more thoroughly than it had heretofore done, in the area which its location best qualified it to operate in. The Vilas, Keith & Chester agreement was perhaps the first important step in that direction, but the culmination of it did not come until the trust agreement of 1882, and after that time there was a more thorough unification of interests and more thorough direction as to the operation of the plants in

the various localities and in the various corporations ; and that unification has practically continued until this time " (vol. 17, p. 3467).

2. A few of these acquisitions made by the Standard Oil interests prior to 1882, which have been already described, were made subsequent to the Vilas, Keith & Chester Agreement. Where properties were acquired, the money for the purchase came either from the treasury of the Standard Oil Co. of Ohio or from the treasury of one of the companies whose stock was held by Vilas, Keith & Chester (J. D. Archbold, vol. 17, p. 3467). Where corporate stocks were subscribed for or acquired they were issued or transferred to Vilas, Keith & Chester, or were issued or transferred to individuals acting for the stockholders of the Standard Oil Co. of Ohio. Where the latter course was adopted, however, it would seem that the stocks were endorsed in blank and delivered to Vilas, Keith & Chester. They had the custody of all of the stocks held for common account at the time of the Trust Agreement, and turned them in to the trustees named in the Trust Agreement (See receipt of J. A. Bostwick, Treas. of the Standard Oil Trust, to George H. Vilas ; Def. Ex. 270, vol. 19, p. 628).

3. The stock of the *Bush & Denslow Manfg. Co.* and the *Empire Refining Company* acquired in 1880 was transferred to J. D. Archbold and Wm. Rockefeller, jointly, for account of the Standard Oil shareholders (J. D. Archbold, vol. 17, pp. 3639-42 ; Def. Exs. 321, vol. 19, p. 757, and 334, vol. 19, p. 798). The stock of the *Chesebrough Manfg. Co.*, on its acquisition, was transferred to Charles Pratt & Co., J. D. Archbold, S. C. Lewis, Ambrose McGregor and H. H. Rogers, by whom it was transferred to Vilas, Keith & Chester (J. D. Archbold, vol. 17, p. 3640 ; Def. ex. 323, vol. 19, p. 758). The 95 shares of the *Franklin Pipe Line Co.* stock acquired were held by individuals for account of the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3642). Among the original subscribers to the stock of the Elizabethport Acid Works were McGregor, Alexander and Freeman, who took six-sevenths of the stock for the Standard Oil shareholders (J. D. Archbold, vol. 17, p. 3634 ; Def. Ex. 310, vol. 19, p. 731).

4. *The Acme Oil Co.* of Pennsylvania was organized to take over the Pennsylvania properties of the Acme Oil Co. (Def.

Ex. 282; J. D. Archbold, vol. 17, p. 3260). The incorporators were J. D. Archbold, F. Q. Barstow, Wm. G. Warden, Henry L. Davis and Duncan McIntosh, all of whom represented the Standard Oil shareholders (J. D. Archbold, vol. 17, pp. 3633-3634; Def. Ex. 308, vol. 19, p. 723). The *National Transit Co.*, was organized to take over the pipe lines belonging to the Standard Oil interests into one organization (J. D. Archbold, vol. 17, p. 3232). At the time of its organization, the physical properties of the American Transfer Co. were conveyed to the National Transit Co. and 94 per cent of the stock of the United Pipe Lines was transferred to it by Vilas, Keith & Chester (J. D. Archbold, vol. 17, p. 3466; Def. Exs. 341-A, vol. 19, p. 820, and 282, vol. 19, p. 673). The National Transit Co. also acquired from the stockholders of the *National Storage Co.* the capital stock of that company; 503,000 shares of its capital stock were issued to Vilas, Keith & Chester, Trustees, in payment for the stock of the United Pipe Lines and the properties of the American Transfer Co., and 75,000 shares were issued to the stockholders of the National Storage Co. in payment for their stock. (Def. Exhibit 328, vol. 19, p. 774). The *Long Island Refining Co.* was liquidated, its properties being conveyed to the Standard Oil Co. (of Ohio). (Def. Exhibits 342, vol. 19, p. 821, & 282, vol. 19, at p. 674). The stock of the *Consolidated Tank Line* was increased Vilas, Keith & Chester taking their *pro rata* of the increase of stock. (Def. Exhibit 325, vol. 19, p. 763). The stock of the *Producers' Consolidated Land & Petroleum Co.* was reduced, resulting in the proportionate reduction in the holdings of Vilas, Keith & Chester, trustees. (Def. Exhibit 329, vol. 19, p. 774). The *Philadelphia Refining Co.*, acquired from the Empire Transportation Co. and named in the Vilas, Keith & Chester agreement, disappeared, its refinery having been conveyed to the Atlantic Refining Co. One or two other refining companies named in that agreement disappeared for similar reasons. The *Chess-Carley Co.* was organized to take over the properties of Chess, Carley & Co. (a half interest in which had been held by Standard Oil interests since 1873). One-half of the stock was issued to Vilas, Keith & Chester, trustees. (Def. Exhibit 324, vol. 19, p. 759). The corporation of *Thompson & Bedford Co., Ltd.*, was organized to take over the business of Thompson & Bedford in which the Standard

Oil shareholders had a half interest. Four-fifths of the stock, immediately on the organization of the Company, was transferred to Waring, McGregor, Brown, Archbold and Rogers for account of the Standard Oil shareholders. (Def. Exhibit 331, vol. 19, p. 782 ; J. D. Archbold, vol. 17, pp. 3641-3642). The *Galena Farms Oil Co.* was organized to take over the producing properties of the Galena Oil Works, Ltd., Barstow, Archbold, Vandergrift and McIntosh being four of the incorporators. They represented Standard Oil shareholders. (J. D. Archbold, vol. 17, p. 3642 ; Def. Exhibit 337, vol. 19, p. 802).

FOURTH. Trust Agreement of 1882.

THE TRUST AGREEMENT OF 1882 WAS MERELY A CHANGE IN THE FORM IN WHICH THE COMMON PROPERTIES REPRESENTED BY THE STOCK OF THE STANDARD OIL CO. (OF OHIO) AND THE VILAS, KEITH & CHESTER STOCKS WERE HELD FOR THE COMMON ACCOUNT. THE TRUSTEES NAMED IN THE TRUST AGREEMENT ISSUED TO THE HOLDER OF EACH SHARE OF THE STOCK OF THE STANDARD OIL CO. (OF OHIO) TWENTY TRUST CERTIFICATES TO REPRESENT HIS INTERESTS IN THE STANDARD OIL CO. (OF OHIO) AND IN THE STOCKS HELD BY VILAS, KEITH & CHESTER. THE TRUST AGREEMENT WAS DEVISED AS A SIMPLE AND EFFECTIVE PLAN FOR HOLDING THE COMMON PROPERTIES AND FURNISHING THE COMMON OWNERS WITH SUITABLE EVIDENCES OF THEIR RESPECTIVE INTERESTS.

The signers of the Trust Agreement of 1882 were the stockholders of the Standard Oil Co. (of Ohio) and Vilas, Keith & Chester, the trustees who held for the common benefit of said stockholders the stocks of the other companies named in the Trust Agreement. They comprised all of the three classes which, according to its terms, the Trust Agreement was to embrace (J. D. Rockefeller, vol. 16, pp. 3098 & 3181 : J. D. Archbold, vol. 17, p. 3258 : Def. Exhibit 386, vol. 19, p. 887). The stockholders of the Standard Oil Co. (of Ohio) each transferred the stock held by him to the trustees named in the Trust Agreement (Def. Exhibit 386). Vilas, Keith & Chester turned in to the trustees all of the stocks that had been held for the common account, that is to say, the stocks of all of the companies named in the Trust Agreement other than the Standard

Oil Co. (of Ohio) (See receipt of J. A. Bostwick, Treasurer Standard Oil Trust, to G. H. Vilas : Def. Exhibit 270, vol. 19, p. 628. See also transcripts from stockbooks showing transfers from Vilas, Keith & Chester to the trustees of the Standard Oil Trust : Def. Exhibits 307, 311, 313, 315, 317, 319, 323, 324, 325, 326, 328, 332 & 339, vol. 19, pp. 720-808). The trustees named in the Trust Agreement issued trust certificates to the amount of \$70,000,000, face value, to represent the properties transferred to them by the signers of the Trust Agreement. (Def. Exhibit 270, vol. 19, p. 628 ; Pet. Exhibit 250, vol. 7, p. 423.) Each of the stockholders of the Standard Oil Co. received the same proportion of the certificates issued by the trustees which he had previously held of the stock of the Standard Oil Co., so that he retained the proportionate interest in the entire business which previously had been represented by his stock in the Standard Oil Co., and by his proportionate interest in the stocks held in trust by Vilas, Keith & Chester. (J. D. Rockefeller, vol. 16, p. 3182.) The capital stock of the Standard Oil Co. was \$3,500,000, so that in place of each share of stock in that Company the stockholders received twenty shares of trust certificates. (J. D. Archbold, vol. 17, p. 3259 ; List of stockholders of Standard Oil Co., Def. Exhibit 386, vol. 19, p. 887 ; list of original certificate holders, Bill of Complaint, p. 58.)

The reasons for the Trust Agreement of 1882 are stated by Mr. Archbold as follows :

" It was made as a simple and effective form of holding the interests which had been theretofore acquired. We were advised by counsel that neither the Standard Oil Co. of Ohio nor indeed any other single corporation could successfully or safely, perhaps, hold them. They were varied in nature ; the property was widespread, located in many different States, the laws of which were in many cases restrictive as to the rights of corporations, and the trusteeship was suggested as a simple method of bringing together those properties so as to provide for an evidence of ownership, a token of ownership that would be marketable, that would give the interests a market value, a basis for trading, and that would enable an administrative oversight in the simplest possible way. * * *

There was no general token or evidence of ownership prior to 1882, and that was a very controlling feature

of the necessity that led to the making of the trust agreement. Individuals in interest, through joint ownership in the Standard Oil Company of Ohio and in the Vilas, Keith & Chester holdings, wanted something, as I say, that would evidence their ownership in the property as a whole, and that could be marketed."

(J. D. Archbold, vol. 17, pp. 3259-3260.)

FIFTH. Relation of the business at the time of the Trust Agreement to the business of to-day.

I. THE PROPERTIES ALREADY OWNED BY THE STOCKHOLDERS OF THE STANDARD OIL CO. (OF OHIO) IN 1882 INCLUDED SUBSTANTIALLY ALL THE PROPERTIES NOW OWNED THAT HAVE NOT SINCE BEEN ORIGINATED BY THE OWNERS OF THE STANDARD OIL BUSINESS. EXCEPT AS TO PROPERTIES WHICH HAD THEN ALREADY BEEN ACQUIRED THE PLANT OF TO-DAY IS ALMOST WHOLLY THE CREATION OF THE OWNERS OF THE STANDARD OIL BUSINESS.

1. The Standard Oil Companies, including the Galena-Signal Oil Company now own and operate twenty-two refining and lubricating plants. Of these, fifteen have grown up from plants owned by the Standard Oil Companies at the time of the Trust Agreement and are the same plants, modernized and greatly enlarged. Six have been created by the Standard Oil Companies since 1882. One was purchased for \$84,000 just after the trust agreement ; and now represents an investment of nearly a million and a half dollars and has a capacity of nearly a million barrels of crude a year.

2. In 1882 the chief refineries of the Standard Oil interests in and around New York Harbor were the Long Island refinery and the Brooklyn refinery, owned by the Standard Oil Co. (of Ohio); the Pratt refinery and the Queens County refinery in Brooklyn and on Newtown Creek, owned by Charles Pratt & Co.; the Sone & Fleming Works on Newtown Creek, owned by the Sone & Fleming Co.; the Bayonne refinery at Bayonne, N. J., owned by the Standard Oil Co. (of Ohio), and the Eagle Works at Communipaw, then being constructed, and owned by the Standard Oil Co. (of Ohio). The Long Island Works, the Pratt Works, the Queens County Works and the Sone & Fleming Works are now the great refineries of the

Standard Oil Co. of New York. The Bayonne refinery of 1882 has become the great Bayonne refinery of the Standard Oil Co. (New Jersey), and the Eagle Works at Communipaw is one of the Standard Oil Co.'s (New Jersey) four great refineries (J. D. Archbold, vol. 17, p. 3265; Def. Ex. 269, vol. 19, p. 627; 282, p. 673; 271, p. 633; 272, p. 644).

In Philadelphia the Standard Oil interests in 1882 owned the Atlantic and Philadelphia Works which are in operation to-day and have become one of the greatest of all the refineries. They were then and are still owned by the Atlantic Refining Co. (Def. Exs. 282, 271 & 269). At Baltimore the Canton Works of the Camden Consolidated Oil Co. and the works of the Baltimore United Oil Co. of 1882 have become the Baltimore Works of the Standard Oil Co. (New Jersey) (Def. Exs. 271 & 282). The works at Parkersburg, which in 1882 were owned by the Camden Consolidated Oil Co., are now the Parkersburg Works of the Standard Oil Co. (New Jersey). At Pittsburg in 1882 the Standard Oil interests had two refineries, one the refinery of the Standard Oil Co. of Pittsburg, and the other the refinery of the Central Refining Co., Ltd., of which Company the Standard Oil interests owned 2,268 shares out of 2,553. In 1889 the Central Refining Company's Works were consolidated with the works of the Standard Oil Co. of Pittsburg (Def. Ex. 282, p. 673). These are now the Pittsburg Works of the Atlantic Refining Co. In the oil regions, in 1882, the Standard Oil interests owned the works of the Acme Oil Co. and the Keystone Refining Co. at Titusville, the Imperial refinery at Oil City and the Eclipse Works at Franklin, besides their interest in the Galena and Signal Works. The Galena and Signal Works are to-day the works of the Galena-Signal Oil Company. The works at Titusville were destroyed by fire in the early eighties (J. D. Archbold, vol. 17, p. 3260). The process of consolidation has led to the abandonment of the Imperial refinery, but the Eclipse Works have become one of the great refineries of the Atlantic Refining Company (Def. Exs. 269, vol. 19, p. 627; 271, p. 633; 282, p. 673). At Cleveland the Standard Oil Company (of Ohio) still operates the works that it owned in 1882, and also owns the works that in 1882 were owned by the American Lubricating Oil Company (Def. Ex. 282 & 271, *id.*).

The Atlas Refining Company had a small plant at Buffalo

which was purchased in the year 1882 and was the nucleus of the Atlas Refinery, now owned by the Standard Oil Co. of New York (J. D. Archbold, vol. 17, p. 3253; Def. Ex. 272, vol. 19, p. 664). The cost of the improvements at the Atlas Works, as they now stand, is more than \$1,300,000 and their capacity is nearly a million barrels a year (Def. Ex. 269, vol. 19, p. 627).

The refineries now owned by the Standard Oil Companies at Lima, Ohio, at Whiting, Ind., at Sugar Creek, Mo., at Necedah, Kan., at Wood River, Ill., at Richmond, Cal., they have themselves created since 1882. At all of these points except in California they were pioneers in the field. In California they purchased a refinery having a capacity of 200 barrels a day, from which an inferior product was produced, incapable of use without admixture with eastern oils. This refinery was replaced with the Richmond Refinery, which consumes 30,000 barrels of crude a day (J. D. Archbold, vol. 17, p. 3252; H. M. Tilford, vol. 17, pp. 3490-3).

The refineries that were owned by the Standard Oil interests in 1882 have been practically reconstructed (J. D. Archbold, vol. 17, p. 3252). Their capacity has been increased many fold (Def. Ex. 269, vol. 19, p. 627; Archbold, vol. 17, pp. 3252-3). The total consumption of crude oil by all of the Standard Oil refineries in 1882 was 16,592,593 barrels; it has since increased steadily from year to year (Def. Ex. 268, vol. 19, p. 626). In 1906 it had increased four-fold, and in 1908 it was over 70,000,000. (J. D. Archbold, vol. 17, pp. 3251-2). The investments in the refinery properties have increased proportionately, *i. e.* from \$17,000,000 to nearly \$60,000,000 (J. D. Archbold, vol. 17, p. 3253; Def. Ex. 269, vol. 19, p. 627).

3. The pipe lines of the Standard Oil interests in 1882 consisted of 1,062 miles of trunk lines and 2,468 miles of gathering lines. In 1899 there were 3,904 miles of trunk lines and 10,749 miles of gathering lines. In 1908 there were 9,388 miles of trunk lines and 45,227 miles of gathering lines (Def. Exs. 261 & 262, vol. 19, pp. 621). This increase in the mileage of the pipe lines is almost altogether the result of new construction by the Standard Oil interests. (J. D. Archbold, vol. 17, pp. 3232-3233.) The only trunk line that has been acquired is the Crescent Pipe Line running from a point in Western Pennsylvania to Marcus

Hook at the mouth of the Delaware River. This line is about three hundred miles long. (J. D. Archbold, vol. 17, p. 3233.) It was purchased by the National Transit Co. in 1895. At the time the Crescent Pipe Line was bought, the gathering system connected with that line, known as the Mellon Pipe Lines, was also acquired. The Mellon Lines comprised about 302 miles of pipe. (J. D. Archbold, vol. 17, p. 3466.) Along with the purchase of the Globe refinery forty-five per cent. of the stock of the Western & Atlantic Pipe Lines was acquired. (Def. Exhibit 271, vol. 19, p. 633.) The gathering lines of this Company, which included the line formerly known as the Craig-Elkins Line, consisted of something less than three hundred miles of two and three inch pipe. (Mr. Archbold, Vol. 17, p. 3631.) At the time of the purchase of the Holdship & Irwin Refinery they owned an interest in a few miles of pipe in Butler County, consisting of fifteen or twenty miles of two inch pipe. This line was acquired. (J. D. Archbold, vol. 17, p. 3630). No other pipe lines have been acquired by Standard Oil interests since 1882. *All the rest they have built.*

4. The marketing business of the Standard Oil Co. as it exists today, is equally with the refining branch of the business and the pipe lines, a development of the business as it already existed in 1882. The part played in its development by acquisitions of outside interests has been very small. There have been great changes in the methods of conducting the business. Changes have been made in the corporate agencies through which the business is conducted in different localities, but substantially the domestic marketing business of today is the result of the natural growth of the business which existed at the time of the Trust Agreement in 1882. The marketing agencies in the New England States were in 1882 the Maverick Oil Co., the Beacon Oil Co. and the Portland Kerosene Oil Co. Their plants today are the main marketing stations of the Standard Oil Co. of New York. (Def. Exhibit 282, vol. 19, p. 673). In Kentucky, Tennessee, Louisiana, Mississippi, Alabama, Georgia, Florida, North Carolina, South Carolina, the Chess-Carley Co. was marketing oil as the agent of the Standard interests in 1882. Today its marketing facilities in North Carolina and South Carolina are utilized by the Standard Oil Co. (New Jersey) and in the other

States mentioned by the Standard Oil Co. (Kentucky). The new Waters-Pierce Oil Co. succeeded to the business which the old Company was doing in 1882 in the Southwestern States. The Standard Oil Co. (of Ohio) the Standard Oil Co. (Indiana), the Standard Oil Co. (Nebraska), the Continental Oil Co. and the Standard Oil Co. (California) have succeeded to the business which in 1882 was done by the Consolidated Tank Line Co. and the Standard Oil Co. (of Ohio), in the northwestern States and in the States west of the Mississippi River. (Def. Exhibits 282 & 271, vol. 19, pp. 673-633).

The extension of the marketing facilities in the various States has revolutionized the marketing business. In 1882 the number of marketing stations operated by the Standard Oil interests was 130. (J. D. Archbold, vol. 17, p. 3242). These were located in the larger cities and towns. (J. D. Archbold, vol. 17, p. 3243). The trade was supplied largely through jobbers at the more important points and through general merchants at the smaller points. (J. D. Archbold, vol. 17, pp. 3242-3243). *In 1888 the number of stations had increased to 313, and in 1906 to 3573.* (J. D. Archbold, vol. 17, pp. 3242-3244; Def. Exhibits 263 & 264, vol. 19, pp. 622). These 3573 stations are distributed throughout the United States, the number in any locality depending upon the density of the population (J. D. Archbold, vol. 17, pp. 3243-3244). *Almost without exception these stations are the creation of the Standard Oil interests* (J. D. Archbold, vol. 17, p. 3243). In 1908, the total number of marketing stations operated by the Standard Oil interests, exclusive of the Waters-Pierce Co., was 3178. *Of these stations 2552 had been established subsequent to July, 1890. Only 16 had been acquired from outside interests, all the rest being the creation of one or the other of the Standard Oil companies* (Def. Exhibit 278, vol. 19, p. 664).

SIXTH. Corporate organizations since the Trust Agreement of 1882.

I. WITH VERY FEW EXCEPTIONS ALL OF THE COMPANIES WHOSE STOCKS ARE NOW OWNED BY THE STANDARD OIL CO. (NEW JERSEY) WERE EITHER AMONG THE COMPANIES NAMED IN THE TRUST AGREEMENT OF 1882 OR HAVE SINCE THAT TIME BEEN ORGANIZED BY THE

TRUSTEES OF THE STANDARD OIL TRUST, OR BY ONE OR OTHER OF THE STANDARD OIL COMPANIES, AND THEIR CAPITAL CONTRIBUTED OUT OF THE COMMON MONEYS OF THE OWNERS OF THE BUSINESS. IN NEARLY ALL CASES THE PROPERTIES HELD BY THESE COMPANIES WERE EITHER OWNED IN OR PRIOR TO 1882 BY ONE OR OTHER OF THE COMPANIES NAMED IN THE TRUST AGREEMENT OF 1882 OR HAVE SINCE BEEN CREATED BY THE OWNERS OF THE STANDARD OIL COMPANIES. IN THE MOST NOTABLE INSTANCES THE ORIGINAL CAPITAL OF THE COMPANIES WAS PAID IN MONEYS AND PROPERTIES WHICH IN 1882 BELONGED TO THE STANDARD OIL CO. (OF OHIO).

1. The greatest of the Standard Oil companies at the time of the Trust Agreement of 1882 was the Standard Oil Co. (of Ohio) (Pet. Exhibit 250, vol. 7, p. 423; Def. Exhibit 282, vol. 19, p. 673). Its assets were over \$18,000,000. They included the Long Island Refinery and the Brooklyn refinery, the Empire yards in New York, the Bayonne refinery and the partially constructed Eagle works at Communipaw, N. J., all of the tank cars in use by Standard Oil interests, and the marketing stations in northern Ohio, Indiana and Illinois, in Wisconsin, Minnesota and the Rocky Mountain States, and in the Pacific Coast States. (Def. Exhibit 282, vol. 19, p. 673). The most important of the Standard Oil Companies now existing have been carved out of the Standard Oil Co. (of Ohio).

(a) The Standard Oil Co. of New York and the Standard Oil Co. (New Jersey) were organized in 1882 by the Trustees of the Standard Oil Trust. The capital stock of the Standard Oil Co. (New Jersey) was \$3,000,000. and the capital stock of the Standard Oil Co. of New York was \$5,000,000. All of the stock of each company was issued to the Trustees of the Standard Oil Trust. (Def. Exhibit 271, vol. 19, p. 633). The entire capital of each company was paid to it in cash and property by the Standard Oil Co. (of Ohio). The Standard Oil Co. (of Ohio) conveyed to the Standard Oil Co. (New Jersey) real estate and improvements to the value of about \$2,000,000. and paid the balance of the capital in cash. (J. D. Archbold, vol. 17, p. 3291). The real estate and construction consisted of the Bayonne refinery and the Eagle works at Communipaw. (Def. Exhibit 271, vol. 19, p. 633). To the Standard Oil Co. of New

York the Standard Oil Co. (of Ohio) conveyed real estate and construction of the aggregate value of about \$2,500,000. and paid to it about \$2,500,000 in cash. The real estate and improvements consisted of the Long Island works, the Brooklyn works, the Empire yards and other property in the State of New York. (J. D. Archbold, vol. 17, p. 3291-3292 ; Def. Exhibit 271, vol. 19, p. 633).

(b) In 1891, the Standard Oil Co. (of Ohio) transferred all of its tank cars to the Union Tank Line upon the organization of that Company by the Trustees (Def. Exhibit 271, *id.*)

(c) Four great marketing companies were organized by the trustees of the Standard Oil Trust, the original assets of which either in whole or in great part consisted of properties which in 1882 were owned by the Standard Oil Co. (of Ohio), and were transferred by that Company to the new companies upon their organization. These four companies were the Standard Oil Co. (Minnesota), the Standard Oil Co. (Iowa), P. C. Hanford Oil Co. and the Continental Oil Co. The entire stock of the Standard Oil Co. (Minnesota) was taken by the trustees at the time of the organization of that company, and marketing facilities owned by the Standard Oil Co. (of Ohio) were transferred to it. The trustees took the majority of the stock of the other three companies at the time of their organization, and transferred to them the marketing properties of the Standard Oil Co. (of Ohio) in the States and Territories where they afterwards acted as the marketing agencies of the Standard Oil business. These four companies acted as the marketing agencies of the Standard Oil business in Northern Illinois, Wisconsin, Minnesota and in all of the States and Territories west of the Mississippi except in those districts where marketing facilities were afforded by the Waters-Pierce Oil Co. and the Consolidated Tank Line Co. (Def. Exhibits 272 & 271, vol. 19, pp. 644, 633) The Continental Oil Co. is still one of the great Standard Oil marketing companies ; the P. C. Hanford Oil Co. was succeeded by the Standard Oil Co. (Illinois) ; and that Company and the Standard Oil Co. (Minnesota) have transferred their properties to the Standard Oil Co. (Indiana). The Standard Oil Co. (Iowa) has recently transferred its properties to the Standard Oil Co. (California) and is now in liquidation.

2. The greatest of the companies now owned by the Standard Oil Co. (New Jersey), aside from the companies that were owned at the time of the Trust Agreement of 1882, and the companies that were created out of the assets of the Standard Oil Co. (of Ohio), were originally organized by the Trustees of the Standard Oil Trust or by one of other of the Standard Oil companies, and their assets furnished and their properties created out of the common moneys of the owners of the Standard Oil business.

(a) The Standard Oil Co. (Indiana) and the Solar Refining Co. were organized by the Trustees of the Standard Oil Trust who took all of the capital stock at the time of the organization of the companies (Def. Exhibit 271, vol. 19, p. 633; J. D. Archbold, vol. 17, pp. 3282 and 3475-3476). The Solar Refining Co. constructed the refinery at Lima, Ohio ; the Standard Oil Co. (Indiana) constructed the refineries at Whiting, Ind., and Sugar Creek, Mo., and at North Alton, Ill. The Standard Oil Co. (Kansas) was originally organized by the Standard Oil Co. (Kentucky) which took all the original stock, and all of its stock was transferred or issued to the Standard Oil Co. (New Jersey). The Standard Oil Co. (Kansas) constructed the refinery at Neodesha which it still owns and operates (J. D. Archbold, vol. 17, p. 3476; Def. Exhibit 271, vol. 19, p. 633).

(b) All of the pipe line companies which have come into existence since 1882, excepting only the Crescent Pipe Line, were organized either by the Trustees of the Standard Oil Trust or by the National Transit Co. In every instance all of the stock was taken either by the National Transit Co. or by the Trustees of the Standard Oil Trust, and the capital was paid for in money, or by the conveyance of pipe lines already constructed by the National Transit Co. The New York Transit Co. was organized to take over the lines of the National Transit Co. in the State of New York. The Northern Pipe Line Co. and the Southwest Pennsylvania Pipe Lines were organized to take over from the National Transit Co. or to construct lines in northwestern Pennsylvania and in southwestern Pennsylvania respectively. The Southern Pipe Line Co. was organized to construct the line from the West Virginia border through Pennsylvania to Millway and to Philadelphia. The Eureka Pipe Line was organized to construct lines in

West Virginia. The Macksburg Pipe Line, the Buckeye Pipe Line, the Cygnet Pipe Line and the Connecting Pipe Line Companies were organized to construct or to take over from the National Transit Co. lines in Ohio. The Indiana Pipe Line Co. was organized to take over from the National Transit Co. lines in Indiana. The Cumberland Pipe Line Co. was organized to construct pipe lines in Kentucky (Def. Exs. 271 & 272).

(c) The pipe lines owned by the producing companies, the Prairie Oil & Gas Co. and the Ohio Oil Co., are creations of the Standard Oil interests. The Prairie Oil & Gas Co. was organized by the National Transit Co. and all of its capital was contributed by that Company. The stock of the Ohio Oil Co. was purchased by the National Transit Co. in 1889 when it was a producing company and nothing more. In 1906 it constructed its system of private pipe lines in the Illinois field, (Def. Exhibits 271, 272 & 282, vol. 19, pp. 633, 644 & 673 : Chesebrough, vol. 3, p. 1403).

(d) The great foreign marketing companies were all originally organized either by the Trustees of the Standard Oil Trust or by one or other of the Standard Oil companies. The chief of these, and the only one which is made a party defendant to the action, is the Anglo-American Oil Co., which was organized by the Trustees of the Standard Oil Trust who subscribed for its entire stock. (Def. Exhibit 282, vol. 19, p. 673.)

3. The only refining company which now plays a great part in the Standard Oil business, that was not owned by the Standard Oil interests prior to 1882 or subsequently organized by them, is the Standard Oil Co. (California). In 1900 the Standard Oil Co. (New Jersey) purchased the entire capital stock of the Pacific Coast Oil Co., paying therefor \$761,000. (H. M. Tilford, vol. 17, p. 3494). The name of the Company was changed to the Standard Oil Co. (California). Its stock was increased from \$1,000,000. to \$17,000,000., the Standard Oil Co. (New Jersey) taking the entire increase of its stock. (Def. Exhibit 271, vol. 19, p. 633.) With the capital contributed by the Standard Oil Co. (New Jersey) the Company erected the great Richmond refinery, the little refinery previously owned by the Pacific Coast Oil Co. being dismantled and abandoned. It constructed the hundreds of miles of pipe line through which crude oil is conveyed from the California fields to the Richmond refinery. The properties acquired from the Pacific

Coast Oil Co. cannot be regarded even as a nucleus of the business of the Standard Oil Co. (California). (H. M. Tilford, vol.17, pp. 3491-3495 ; Def. Exhibits 271 and 273, vol. 19, pp. 633 and 650).

4. The only other companies that can be regarded as factors in the Standard Oil business are the producing companies. Aside from the Ohio Oil Co. and the Prairie Oil and Gas Co., the most important producing company now owned by the Standard Oil interests is the South Penn Oil Co. This Company was originally organized by the Trustees of the Standard Oil Trust. (Deft. Exhibit 271, vol. 19, p. 633).

5. The properties of the companies now owned by the Standard Oil interests, in so far as they are the result of acquisitions from other companies, have come almost altogether from the companies which were owned by the companies named in the Trust Agreement of 1882, or from companies organized by the Standard Oil interests.

(a) The conveyance by the Standard Oil Co. (of Ohio) to the Standard Oil Co. (New Jersey) and to the Standard Oil Co. of New York of their original plants has already been described. The additional plants now owned by the Standard Oil Co. (New Jersey) have been conveyed to it by the Baltimore United Oil Co. and the Camden Consolidated Oil Co. The additions to the manufacturing plant of the Standard Oil Co. of New York have come from Charles Pratt & Co., the Sone & Fleming Co. and the Devoe Manufacturing Co., the only plant derived from any company not owned in 1882 or organized by the Standard Oil Trustees being the plant of the Atlas Refining Co., which the Trustees of the Standard Oil Trust had acquired in 1882. The manufacturing plants of the Atlantic Refining Co. at Pittsburg and Franklin were conveyed to it by the Standard Oil Co. Pittsburg and the Eclipse Lubricating Oil Co. respectively. The plant of the Vacuum Oil Co. at Olean came to it from the Acme Oil Co. through the Standard Oil Co. of New York.

(b) The nucleus of the marketing business of each of the present marketing companies in every district in which it now does business came directly from one of the companies named in the Trust Agreement of 1882, or came indirectly from such company through some intermediate company organized by the Trustees of the Standard Oil Trust. (Def.

Exhibits 271, 272 & 282 ; vol. 19, pp. 633, 644 & 673) The marketing properties of the Standard Oil Co. of New York in New England were derived directly from the Maverick Oil Co. and the Portland Kerosene Oil Co., and from the Beacon Oil Co. through the Maverick Oil Co. The marketing properties of the Standard Oil Co. (Indiana) have come to it through the Standard Oil Co. (of Ohio) directly or through the P. C. Hanford Oil Co. and the Standard Oil Co. (Minnesota) or from the Consolidated Tank Line Co. The marketing properties of the Standard Oil Co. (Nebraska) have come to it from the Consolidated Tank Line Co. through the Standard Oil Co. (Indiana) ; those of the Standard Oil Co. (Kentucky) have come directly from the Chess-Carley Co. ; those of the Standard Oil Co. (California) have come to it from the Standard Oil Co. (of Ohio) through the Standard Oil Co. (Iowa).

6. Many of the existing companies have been organized directly by the Standard Oil Co. (New Jersey) their entire stock being contributed by that Company ; *e. g.* the Colonial Oil Co., the Interstate Cooperage Co. The Standard Oil Co. (New Jersey) since 1899 has subscribed for additional stock in various of the other companies, and through such contributions has directly contributed a great part of their capital ; *e. g.*, it has subscribed for and taken \$8,000,000 additional capital stock of the Standard Oil Co. of New York, it took the entire increase in the stock of the Vacuum Oil Co. from \$25,000 to \$2,500,000, and has subscribed for the additional stock of the Pacific Coast Oil Co. (the Standard Oil Co. of California) upon the increase of the stock of that Company from \$1,000,000 to \$17,000,000.

7. Defendants' Exhibit 271, (vol. 19, pp. 633 to 643), shows in detail the origin of each of the companies now owned by the Standard Oil Company (New Jersey) or any other Standard Oil company, and the source from which it derived its properties. Defendants' Exhibit 282, (vol. 19, pp. 673 to 681), shows all the essential facts in reference to each of the companies named in the Trust Agreement of 1882 and the ultimate disposition made of their properties. Defendants' Exhibit 272 (vol. 19, pp. 644-649) and Defendants' Exhibit 273 (vol. 19, p. 650) show the essential facts in respect to every other company in which the Standard Oil Trustees or any of the Standard Oil Companies have at any time had an interest.

To these Exhibits the Court is respectively referred for the detailed information of the various companies now or heretofore owned by the Standard Oil interests.

SEVENTH. The properties owned at the time of the passage of the Sherman Act and the properties now owned.

I. AT THE TIME OF THE PASSAGE OF THE SHERMAN ACT ALL OF THE ESSENTIAL FACTORS OF THE STANDARD OIL BUSINESS AS IT EXISTS TO-DAY WERE HELD BY THE TRUSTEES OF THE STANDARD OIL TRUST FOR THE COMMON BENEFIT OF THE HOLDERS OF THE STANDARD OIL TRUST CERTIFICATES.

Petitioner's Exhibits 1 (vol. 7, p. 3) and 11 (vol. 7, p. 33) show all the companies in which the Standard Oil Co. (New Jersey) owns stock either directly or indirectly through its ownership in the stock of other companies. Defendants' Exhibit 274 (vol. 19, p. 652) shows the interests held by the Standard Oil Trustees on July 1, 1890.

The following table shows the principal companies, in which stock is now owned by the Standard Oil interests ; the total capital stock and the proportion owned ; the corresponding companies in which stock was owned July 1, 1890 ; the amount of their capital and the proportion owned ; and the origin of companies that have since been acquired. All increases of stock have been taken by the Standard Oil Trustees or one or other of the Standard Oil Companies. (See next page).

TABLE.

Cbrief Companies in which stock is now owned.	Total Capital.	Proportion now owned.	Corresponding Companies in which stock was owned July 1, 1890.	Total Capital.	Proportion owned July 1, 1890.	Origin of Companies not owned July 1, 1890.
Standard Oil Company (New Jersey)	\$98,338,300		Standard Oil Company (N. J.) Baltimore United Oil Company Camden Consolidated Oil Company Eagle Oil Company	\$3,000,000 600,000 200,000 350,000	All “ “ “	Owned works at Com- munipaw conveyed by Standard Oil Company (Ohio) to Standard Oil Com- pany (New Jersey)
Anglo-American Oil Company, Ltd. Atlantic Refining Company	£1,000,000 \$5,000,000	All “	Bergenport Chemical Company Anglo-American Oil Company, Ltd. Atlantic Refining Company Acme Oil Company of Pennsylvania Eclipse Lubricating Oil Company Standard Oil Company Pittsburg Imperial Refining Company Imperial Refining Company, Ltd.	100,000 £200,000 \$400,000 300,000 175,000 300,000 300,000 300,000	“ “ “ “ “ “ “ “	
Buckeye Pipe Line Company	10,000,000	“	Buckeye Pipe Line Company Connecting Pipe Line Company Cygnet Pipe Line Company Machsburg Pipe Line Company	100,000 170,000 1,200,000 200,000	“ “ “ “	

Chesebrough Manufacturing Company, Ltd.	\$500,000	2777/5000	Chesebrough Manufacturing Company, Ltd.	\$500,000	2777/5000
Continental Oil Company	300,000	All	Continental Oil Company	300,000	2061/3000
Colonial Oil Company	250,000	"			
Crescent Pipe Line Company	3,000,000	"			
Eureka Pipe Line Company	5,000,000	"			
Galena Signal Oil Company	8,000,000	14875 shares Preferred 55520 shares Common All	Galena Oil Works, Ltd. Signal Oil Works, Ltd.	150,000 100,000	5175/6000 387½/1000
Indiana Pipe Line Company	8,000,000	Common 1,000,000			
Interstate Cooperage Company	200,000	"			
National Transit Company New York & Transit Company	25,455,200 5,000,000	"	National Transit Company	25,455,200	494092/509104
					Organized in 1893 by National Transit Company.
					Organized in 1891 by National Transit Company.
					Organized by Stand- ard Oil Company (New Jersey) all the stock being taken by that com- pany.
					Stock purchased by National Transit Company in 1895.
					Organized in 1890 by Trustees of Stand- ard Oil Trust.

Chief Companies in which stock is now owned.	Total Capital.	Proportion now owned.	Corresponding Companies in which stock was owned July 1, 1890.	Total Capital.	Proportion owned July 1, 1890.	Origin of Companies not owned July 1, 1890.
Northern Pipe Line Company	\$4,000,000	All	Northern Pipe Line Company	\$1,000,000	All	
Ohio Oil Company	10,000,000	"	Ohio Oil Company	350,000	"	
Solar Refining Company	500,000	"	Solar Refining Company	500,000	"	Organized by National Transit Company in 1890.
Southern Pipe Line Company	10,000,000	"				
South Penn Oil Company	2,500,000	"	South Penn Oil Company	2,000,000	"	Capital stock of Pacific Coast Oil Company, \$1,000,000.
Southwest Pennsylvania Pipe Lines	8,500,000	"	Forest Oil Company Southwest Pennsylvania Pipe Lines	1,645,700 500,000	"	Purchased by Standard Oil Company (New Jersey) in 1900 for \$768,000.
Standard Oil Company (California) (Formerly Pacific Coast Oil Company)	17,000,000	"				
Standard Oil Company (Indiana)	1,000,000	"	Standard Oil Company (Iowa) Standard Oil Company (Indiana) P. C. Hanford Oil Company Standard Oil Company (Minnesota) Consolidated Tank Line Company	600,000 500,000 500,000 500,000 1,000,000	60%	

Standard Oil Company (Kansas)	All	\$1,000,000.				
Standard Oil Company (Kentucky)	1,000,000.	"	Standard Oil Company (Kentucky)	\$600,000.	All	
Standard Oil Company (Nebraska)	600,000.	"	Standard Oil Company of New York	300,000.	"	
Standard Oil Company of New York	15,000,000.	"	Acme Oil Company (New York)	200,000.	"	
			Atlas Refining Company	200,000.	"	
			American Wick Manufacturing Company	25,000.	"	
			Beacon Oil Company	100,000.	"	
			Devoe Manufacturing Company	300,000.	"	
			Maverick Oil Company	100,000.	"	
			Charles Pratt & Company	500,000.	"	
			Oswego Manufacturing Company	100,000.	"	
			Portland Kerosene Oil Company	200,000.	"	
			Sone & Fleming Manufacturing Company	250,000.	"	
			Thompson & Bedford Company, Ltd.	250,000.	4/5	
Standard Oil Company (Ohio)	All	\$3,500,000.	Standard Oil Company (Ohio)	\$3,500,000.	All	

Organized in 1892 by Standard Oil Company (Kentucky); increases of stock taken by Standard Oil Company (New Jersey).

Organized in 1906 by Standard Oil Company (New Jersey).

Chief Companies in which stock is now owned.	Total Capital.	Proportion now owned.	Corresponding Companies in which stock was owned July 1, 1890.	Total Capital.	Proportion owned July 1, 1890.	Origin of Companies not owned July 1, 1890.
Union Tank Line Company	3,500,000.	All				Organized by Standard Oil Trustees in 1891.
Vacuum Oil Company Waters-Pierce Oil Company Cumberland Pipe Line Company	2,500,000. 400,000. 1,000,000.	" 2747/4000 All	Vacuum Oil Company Waters-Pierce Oil Company	25,000. 400,000	75\$/100 2750/4000	Organized by National Transit Company in 1901.
Prairie Oil & Gas Company	10,000,000.					Organized by National Transit Company in about 1900.
Tidewater Oil Company	20,000,000.	31%	Tidewater Pipe Company, Ltd.	2,000,000.	31.075%	

Petitioner's Exhibits 1, 9, 11 & 31-A; vol. 7, pp. 3, 28, 33 & 114 respectively.
 Defendants' Exhibits 274, 282, 271 & 272; vol. 19, pp. 652, 673, 638, 644 respectively.

The only important changes in the Standard Oil business as it existed on July 1, 1890, and as it exists to-day, aside from the changes due to growth, development and expansion, are the changes in the forms of the organizations through which the business as a whole and its different branches are carried on.

EIGHTH. Issues of Trust Certificates.

I. THE ISSUES OF TRUST CERTIFICATES SUBSEQUENT TO THE ORIGINAL ISSUE OF SEVENTY MILLION WERE OF SMALL IMPORTANCE SO FAR AS THE ISSUES IN THE PRESENT CASE ARE CONCERNED.

The total amount of such issues was \$27,250,000 par value of trust certificates; out of this amount over \$15,000,000 were issued as a stock dividend. Of the balance a considerable proportion was issued in the acquisition of the minority interests in companies named in the Trust Agreement. Most of the balance was issued in the acquisition of producing properties which were vested in one or other of the producing companies organized or owned by the trustees. Relatively very little was issued in the acquisition of refining, marketing or pipe line properties. The total amount of certificates issued up to and including 1892 was \$97,250,000. (Pet. Ex. 250, vol. 7, pp. 423-7).

NINTH. Dissolution of the Trust; Common Ownership not affected.

I. THE OWNERSHIP OF THE STANDARD OIL BUSINESS AND OF ALL ITS CONSTITUENT FACTORS HAS BEEN CONTINUOUS AND WAS NOT AFFECTED BY THE DISSOLUTION OF THE TRUST IN 1892. THE STOCKS OF MANY OF THE IMPORTANT COMPANIES HELD BY THE TRUSTEES PRIOR TO THE DISSOLUTION OF THE TRUST PASSED IMMEDIATELY FROM THEM TO THE STANDARD OIL CO. (NEW JERSEY) AND HAVE SINCE BEEN CONTINUOUSLY HELD BY THAT COMPANY. ALL OF THE STOCKS THAT HAD BEEN HELD BY THE TRUSTEES, OR THE PROPERTIES WHICH SUCH STOCKS REPRESENT, WERE VESTED IN ONE OR OTHER OF TWENTY COMPANIES, MOST OF WHICH HAD BEEN ORIGINALLY ORGANIZED BY THE TRUSTEES. THE STOCKHOLDERS IN

EACH OF THESE TWENTY COMPANIES WERE IDENTICAL FROM THE TIME OF THE DISSOLUTION OF THE TRUST UNTIL ALL OF THE COMPANIES WERE ACQUIRED BY THE STANDARD OIL CO. (NEW JERSEY), AND EACH STOCKHOLDER AT ALL TIMES HELD THE SAME PROPORTIONATE INTEREST IN EACH OF THE TWENTY COMPANIES. THE BUSINESS WAS A UNITY AND INDIVISIBLE. IT COULD MAKE NO DIFFERENCE WHETHER THE INTEREST OF A SHAREHOLDER WAS REPRESENTED BY ONE CERTIFICATE OR TWENTY CERTIFICATES.

1. On March 2, 1892, a judgment was rendered in a suit brought in the Supreme Court of Ohio by the State of Ohio on the relation of the Attorney General, against the Standard Oil Co. (of Ohio), after hearing upon Bill and Answer. This decision rendered it inadvisable to continue the form of organization provided by the Trust Agreement for the management of the common properties. The certificate holders thereupon adopted the resolution set forth on pages 64-5 of the Government's Bill of Complaint, providing for the dissolution of the Trust. This resolution was adopted pursuant to Article 21st of the Trust Agreement.

Up to the time of the adoption of the resolution for the dissolution of the Trust in 1892, many of the companies named in the Trust Agreement, and most of those organized or acquired subsequent to the formation of the Trust, had continued as separate corporate organizations. At that time a great many of these organizations which no longer served any particular purpose were dissolved. The chief refining and marketing properties in New York and New England were vested in the Standard Oil Company of New York. The refineries in New Jersey, Maryland, West Virginia, and the marketing stations owned by the companies that had theretofore operated in these states, were vested in the Standard Oil Co. (New Jersey). The Atlantic Refining Co. took over the refining properties in Pennsylvania, other than the Galena and the Signal Oil Works. The marketing stations of the Consolidated Tank Line Co. went to the Standard Oil Co. (Kentucky). The marketing stations of the Standard Oil Co. (Illinois) and those of the Standard Oil Co. (Minnesota) were transferred to the Standard Oil Co. (Indiana). Through these changes the Sone & Fleming Co., Charles Pratt & Co., the Devoe Manfg. Co., Baltimore United Oil Co., Camden Consolidated Oil Co., Standard Oil

Co. Pittsburg, Eclipse Lubricating Oil Co., Imperial Refining Co., Acme Oil Co. of New York, Acme Oil Co. of Penna., Thompson & Bedford Co., Maverick Oil Co., Portland Kerosene Oil Co. and Consolidated Tank Line Co., all of which were among the important companies named in the Trust Agreement, went out of existence. A number of companies that had been organized or acquired after the Trust, *e. g.*, the Atlas Refining Co., The Standard Oil Co. of Illinois; the Standard Oil Co. of Minnesota, also disappeared. The various producing companies were, for the most part, consolidated with the Forest Oil Co., the South Penn Oil Co. or the Ohio Oil Co. All of the Ohio pipe lines were vested in the Buckeye Pipe Line Company (Def. Exs. 271, 272 & 282, vol. 19, pp. 633, 644 & 673; Pet. Exs. 253, 254 & 255, vol. 7, pp. 446, 451 & 452).

2. The stocks of a number of important companies that had been held by the trustees were transferred directly to the Standard Oil Company (New Jersey) and have ever since been held by that Company. Among the stocks that have been so held in continuous ownership by the Standard Oil Co. (New Jersey) are the Chesebrough Manufacturing Company, Continental Oil Company, Galena Oil Works, Limited, Signal Oil Works, Limited, Standard Oil Company (Iowa), Vacuum Oil Company and the Waters-Pierce Oil Company (Pet. Ex. 253, vol. 7, p. 448).

3. The changes effected in the companies about the time of the resolution for the dissolution of the Trust left in the hands of the Trustees stocks of the following companies:

Anglo-American Oil Co. Ltd.

Atlantic Refining Co.

Buckeye Pipe Line Co.

Eureka Pipe Line Co.

Forest Oil Co.

Indiana Pipe Line Co.

National Transit Co.

New York Transit Co.

Northern Pipe Line Co.

Northwestern Ohio Natural Gas Co.

Ohio Oil Co.

Solar Refining Co.

Southern Pipe Line Co.
South Penn Oil Co.
Standard Oil Co. (New Jersey)
Standard Oil Co. (Indiana)
Standard Oil Co. (Kentucky)
Standard Oil Co. of New York
Standard Oil Co. (of Ohio)
Union Tank Line Co.

Of these twenty companies, only three antedate the Trust Agreement of 1882, to wit, the Standard Oil Co. (of Ohio) itself, the Atlantic Refining Co., all the stock of which had been held for the benefit of the Standard Oil stockholders since 1874, and the National Transit Co., which had been organized by Standard Oil interests. Of the remaining seventeen companies, six were pipe line companies, all of which had been organized and their properties created by Standard Oil interests for the common benefit of the certificate holders. The Anglo-American Oil Co., Ltd., the Solar Refining Co., the Standard Oil Co. (Indiana), the Standard Oil Co. (Kentucky), the Standard Oil Co. (New Jersey), the Standard Oil Co. of New York and the Union Tank Line had all been organized by the Standard Oil trustees, and no one else had ever held any of their stock. Their capital had been paid for with the common moneys of the holders of the trust certificates, or with the properties of companies whose stocks were held by the trustees for their account. The South Penn Oil Co., the Ohio Oil Co. and the Forest Oil Co. were producing companies. The first had been originally organized by the Standard Oil trustees, and a large part of the properties of the others had been conveyed to them by companies organized by the Standard Oil trustees. The only one of the twenty companies of which the Standard Oil trustees did not own the entire stock was the Northwestern Ohio Natural Gas. Co. (Def. Exhibits 271 & 272, vol. 19, pp. 643-4). Stocks of these twenty companies were the stocks to be distributed among the holders of Standard Oil Trust certificates, pursuant to the resolution of March, 1892.

4. The Trustees to liquidate the Standard Oil Trust named in the resolution of March, 1892, notified all the certificate holders of the proposed distribution of stocks and requested them to submit their trust certificates for exchange into the stock of the twenty companies. (J. D. Archbold, vol. 17, p.

3384). Several of the larger holders of certificates at once made the exchange, receiving shares and fractional shares in each of the several companies, bearing in each case the same proportion to the amount of stocks in those companies held by trustees that the trust certificates previously held by them had borne to the total amount of the trust certificates outstanding. The smaller certificate holders showed great reluctance about making the exchange. (J. D. Archbold, vol. 17, pp. 3384-5). Mr. Rockefeller, speaking of the slowness of the certificate holders in exchanging their certificates for stock, says :

“ I think many of them, most of them, perhaps—as to the proportion, I could not say—retained their interest for quite a long time after 1892. Some of us proceeded at once. We could not compel them to surrender their interests, and they did retain their interests for a considerable period of time, how long I do not know. They were not in the constituent companies ; they were yet holding these trust certificates, * * * and with those evidences of legal ownership they got their interests in the constituent companies.” (Vol. 16, p. 3194.)

5. The unity of the business was universally recognized. Stocks in the separate companies had no recognized value, and were not bought or sold except as part of the group of stocks together representing an interest in the business as a whole. The common ownership was necessarily recognized in the conduct of the business of the separate companies and the entire business carried on with a view to the interests of the common owners.

Mr. Archbold testifies :

“ Q. Well, as a matter of fact, from 1892 to 1899, were there a great many of the smaller certificate holders who did not transfer their trustees' certificates for assignments of legal interests ? A. They were very slow, indeed, to do so. The trust certificate had a value, not only in a marketable way, but as a collateral security, which they felt would not or might not attach to the separate or segregated interests, and they were exceeding loath, as I say, to make the transfer, and it was a question of a long time and of special effort to secure the transfer.

"Q. Do you happen to remember whether during that period there were any transfers of these assignments of legal interest? A. There were such transfers.

"Q. These smaller certificate holders, in the event of a transfer of their trustees' certificate for an assignment of legal interest, did they thereafter take their assignments of legal interest and get therefor stocks in the then twenty companies, or did they continue to hold the assignment of legal interest? A. Many of them continued to hold the assignments of legal interest. It would have been almost an impossibility for them to have divided their trust certificates, a small trust certificate, into the shares of the different companies. It would have resulted in so small a fraction in the shares of the different companies that it would have had no market value, no value to which they could have attached a market transaction in any way.

"Q. So that as a matter of fact it is true, is it not, that, with the exception of the principal certificate holders, the great body of certificate holders received merely assignments of legal interest for their trust certificates, and thereafter carried their assignments of legal interest instead of converting the same into stocks of those twenty companies, and a great many in addition to that, during that period, actually retained throughout the entire period their trust certificates without exchanging them for assignments of legal interest? A. They did follow both courses.

"Q. Had the trust certificates during the period of the trust a recognized market value, and were they traded in on the market? A. They were traded in currently on the market.

Q. Please state whether or not from 1892 to 1899 there was any trading in the stocks of the twenty companies or any of them? A. I do not recall that there was any such trading. If there was—and, as I say, I do not recall—it was in the group of stocks as a whole, so that the entity was preserved, the ownership as a whole, the assignment as a whole.

Q. Was there any market value, any known market value that attached to the stock of any of the individual companies during that period? A. There was not.

Q. As a matter of fact, had the stocks of any of these twenty companies ever been on the market as marketable securities at any time between 1882 and 1899? A. They had not. They were recognized as parts of a whole, and the value of any individual stock or that of any single company was not known or recognized, had no place in the market.

Q. Take, for example, the stock of the Standard Oil Company of New York. That company, as already appears on the record, was organized by the trustees in 1882. Who took all that stock at the time of the organization? A. The trustees.

Q. It was never on the market in any way at all, was it? A. It was not.

Q. And is that also true of the stock of the Standard Oil Co. of New Jersey? A. It was true of the Standard Oil Company of New Jersey.

Q. And of the Standard Oil Company of Indiana? A. Yes.

Q. And of the various other companies that were created and organized by the trustees during the trust period? A. That is true." (Vol. 17, pp. 3292-3294).

Mr. Rockefeller says :

" These corporations were being stimulated, each of them, in every way that would produce the minimum of cost in their manufacture, and in every way to do their business the best that could be done. These interests of these different companies were all owned by the same people (J. D. Rockefeller, vol. 16, p. 3189).
 * * * * *

Before any dissolution of the trust, the people who were the shareholders in the trust owned all these different properties. * * * Those who transferred their interests from the trust into these constituent companies preserved the same relation that they had sustained before in the ownership of these properties. Those who had not yet transferred, those who were from time to time transferring, yet preserved their same proportionate relation in all these properties. * * * The same people, in the same relations, continued. (J. D. Rockefeller, vol. 16, p. 3190.) * * *

After the dissolution, as I have already stated, the election of the different companies was by this stock, and the administration of its affairs, its particular affairs, and the matter of the sale of its products was made as before, I suppose. Of course, in the matter of the distribution of these products I have not been concerned or interested or taken any part for long years; but let us take, for example, the Standard Oil Company of Ohio, of which I had been the president. As a practical question what would be done, I suppose, would be that the Standard Oil Company of Ohio would supply the trade which it could supply to the best advantage * * * and it would be just the thing that was the

natural thing to do in that regard. These properties were all of the one ownership * * *. I mean that these people who had not returned their certificates and taken their interests in the constituent companies yet held the original trust certificates, and that was their evidence of their interest in the business; that relation was not changed. (J. D. Rockefeller, vol. 16, p. 3192) * * *. I suppose that as a matter of fact these companies, all being owned by the same people, would not be managing their separate businesses except in the way that would be the most productive for all the separate businesses. (J. D. Rockefeller, vol. 16, p. 3193). * * * The control of those different companies in each case was, as I have stated, by the stock holdings, and those companies were then, as now, in this common ownership. * * * There was no change of interest of the parties concerned; that is, every man had just the precise proportion of all this business that he had had before, and so fast as these trust certificates were cancelled, then, instead of having one certificate to represent that precise interest, he had an interest in each one of those companies. (J. D. (Rockefeller, vol. 16, p. 3194)."

The same officers and directors who had been in charge of the affairs of the separate companies in the main continued to act as officers and directors of those companies (Def. Exs. 279, vol. 19, pp. 666-670; J. D. Archbold, vol. 17, p. 3294) There was no change in the situation that existed prior to the trust except that the directors of the separate companies were elected directly by the parties in interest instead of by trustees acting for their account (J. D. Rockefeller, vol. 16, pp. 3187-9).

At all times between the resolution for the dissolution of the Trust and the acquisition of the stocks in the other companies by the Standard Oil Company (New Jersey), each stockholder in the Standard Oil Company (New Jersey) held exactly the same proportionate interest in each of the other companies (leaving out of consideration the Northwestern Ohio Natural Gas Company) that he afterward held in the Standard Oil Company (New Jersey), and in so far as the stocks were still in the hands of the Trustees to liquidate, they also, as representatives of the stockholders who had not exchanged their stocks, held the same proportionate interest in each of the companies. As to the Northwestern Ohio Natural

Gas Company, the same statement holds true with the qualification that the proportions are applicable not to the entire stock of the company, but to that part of it which, at the time of the dissolution of the Trust, had been held by the Trustees.

TENTH. Upon the acquisition of the stocks of all the companies by the Standard Oil Company (New Jersey) each shareholder in the twenty companies became a shareholder in the Standard Oil Co. (New Jersey) in the same proportion in which he had held stock in each of the twenty Companies or in which stock therein had been held for his account by the Trustees.

In 1899 the stock of the Standard Oil Company (New Jersey) was increased from \$10,000,000, divided into 100,000 shares, to \$110,000,000, divided into 100,000 shares preferred stock, and of 1,000,000 shares of common stock. The outstanding stock was to be treated as preferred stock.

On June 19, 1899, the following resolution was adopted by the Board of Directors of the Standard Oil Co. (New Jersey). (Pratt, vol. 1, pp. 83-4) :

"The president or one of the vice-presidents and the treasurer or one of the assistant treasurers, be and are hereby authorized to issue certificates of common stock of this company and deliver the same, in purchase of the stocks of the following companies, at the rate of one share of common stock of this company for the following fractional shares, to wit:

Anglo-American Oil Company, Ltd-----	26,000/972,500
The Atlantic Refining Company-----	50,000/972,500
The Buckeye Pipe Line Co-----	200,000/972,500
Eureka Pipe Line Company-----	50,000/972,500
Forest Oil Company-----	55,000/972,500
Indiana Pipe Line Co-----	20,000/972,500
National Transit Company -----	509,104/972,500
New York Transit Company -----	50,000/972,500
Northern Pipe Line Company-----	10,000/972,500
The Northwestern Ohio Nat. Gas Co-----	32,785/972,500
Ohio Oil Company-----	80,000/972,500
The Solar Refining Co-----	5,000/972,500

Southern Pipe Line Co-----	50,000/972,500
South Penn Oil Co-----	25,000/972,500
Standard Oil Co. of Indiana-----	10,000/972,500
Standard Oil Co. of Kentucky-----	10,000/972,500
Standard Oil Co. of N. J. preferred stock ..	100,000/972,500
Standard Oil Co. of N. Y-----	70,000/972,500
Standard Oil Co. of Ohio-----	35,000/972,500
Union Tank Line Company-----	35,000/972,500"

Common stock of the Standard Oil Company (New Jersey) was issued to an amount exactly equal to the amount of trust certificates outstanding at the time of the dissolution of the Trust. The actual exchanges of stock are set out in detail in Defendants' Exhibit 388 (vol. 19, p. 894). Few of the smaller holders of trust certificates exchanged their certificates for stock in the twenty companies. The total number of stockholders in the separate companies never exceeded one hundred (Def. Ex. 388, vol. 19, p. 894). In June, 1899, there were still outstanding unexchanged over 300,000 shares of trust certificates (Pet. Ex. 250, vol. 7, pp. 427-429).

After the adoption of the resolution of June 19, 1899, a method was devised to enable the small certificate holders to obtain the benefit of the resolution without going to the trouble of actually themselves obtaining the stocks to which their trust certificates entitled them and which, under the terms of the resolution, they had to have in order to obtain common stock of the Standard Oil Co. (New Jersey). This method is described on p. 3665, vol. 17, of the record.

In the first instance shares of the Standard Oil Co. (New Jersey) were issued to both Mr. Rockefeller and Mr. Flagler and the shares owned by them respectively in the twenty companies. In 1899 and afterwards various holders of trust certificates in relatively small amounts, to avoid the inconvenience to them of converting such certificates into shares or fractional shares of the twenty companies for the purpose of transferring such shares or fractional shares to the Standard Oil Co. (New Jersey) transferred their trust certificates to Mr. Rockefeller or Mr. Flagler, and received for them shares of the Standard Oil Co. (New Jersey) owned by Mr. Rockefeller or by Mr. Flagler, as the case might be. Mr. Rockefeller and Mr. Flagler later converted the certificates so transferred by them into the shares of the twenty companies,

and then transferred those shares to the Standard Oil Co. (New Jersey) for its shares. The exchange of stocks was substantially completed in 1900 (Def. Ex. 388, vol. 19, opp. p. 894).

Each holder of stock in each of the twenty companies received the same proportion of the common stock of the Standard Oil Co. (New Jersey) that he had theretofore held in the stock of each of the twenty companies distributed by the Trustees.

ELEVENTH. Not only are the owners of the Standard Oil business whose respective interests are now represented by their holdings in the stock of the Standard Oil Co. (New Jersey) collectively the same body who have owned the Standard Oil business from its inception, but the great majority in interest are the individuals who originated the business and those who became associated with them in the earlier stages of its development.

The total capital stock of the Standard Oil Co. (New Jersey) is divided into----- 983,383 shares
 The surviving members of the firm of Rockefeller, Flagler & Andrews own----- 289,892 shares
 The original stockholders of the Standard Oil Co. (of Ohio), their estates and representatives own----- 420,189 shares
 The stockholders of the Standard Oil Co. (of Ohio) prior to the last increase of stock in that Company, in 1875, own ----- 468,297 shares
 The signers of the Vilas, Keith & Chester Agreement of April 8, 1879, their estates and representatives own----- 629,513 shares
 The signers of the trust agreement of 1882, their estates and representatives own----- 632,997 shares

(Def. Ex. 1, vol. 18, pp. 1-90 ; Def. Ex. 387, vol. 19, p. 890 ; Def. Ex. 257, vol. 19, p. 618.)

TWELFTH. The chief factors in the success of the Standard Oil business.

(a) The owners of the Standard Oil business were the first to adopt the policy of conducting business on an extensive scale with abundant capital, and applied this policy to the conduct of a business in which the conditions peculiarly demanded the employment of abundant capital and extensive operations for its successful development.

The fact that the stockholders of the Standard Oil Company from the beginning were keenly alive to the advantages to be derived from extending and diversifying their business and to the constant need for abundant capital, is established by the story already told of the extension and development of the Standard Oil business. That a business conducted on an extensive scale and with abundant capital has great legitimate advantages cannot be called in question. That the stockholders of the Standard Oil Company were the first clearly to appreciate this principle and to put it in practice will not be disputed.

The original capital of the Standard Oil Company (of Ohio) was probably much larger than that of any other corporation engaged in the petroleum industry (J. D. Rockefeller, vol. 16, p. 3059). Subsequent to the organization of the company the amount of its capital was rapidly increased. At the time of the Trust Agreement the companies named in that Agreement had over \$23,000,000 in general merchandise, cash and crude oil (J. D. Archbold, vol. 17, p. 3259). The extent to which profits have been retained in the business subsequent to the Trust Agreement is sufficiently shown by the balance sheets of the Standard Oil Co. (New Jersey) (Pet. Ex. 2-9, vol. 7; pp. 6-31).

The conditions peculiar to the oil industry demanded great capital and wide extension and diversification of the business in order to insure its success. Of these peculiar conditions the most important is the dependence of the industry upon a supply of crude oil and the uncertainty of the supply where reliance has to be placed on a single field or limited territory. Another is the necessity for a wide distribution of the products of the refineries, requiring the establishment of refineries

at different distributing centers, and an extensive marketing system. Still another is the hazard of fire which is minimized by the multiplication of plants but becomes a consideration of the greatest moment if the whole investment is likely to be wiped out by a single fire.

It will be shown in subsequent paragraphs that the employment of a large capital and the extension of the business are necessary to meet the first two of these conditions. That it tends to minimize the third is sufficiently apparent. To show the importance of the element of fire hazard in the petroleum business where the whole enterprise is at the risk of a single fire, it may be stated that all the great plants of the Acme Oil Company and the Keystone Refining Company were wiped out by a single fire (J. D. Archbold, vol. 17, p. 3343). Mr. Rockefeller says (vol. 16, p. 3114) :

“ In the first place, since the construction of our first refinery, nearly fifty years ago, we have been prepared at any moment, day or night, to hear the fire alarm. We are dealing with a very explosive product, from the crude oil itself and the very first product of the distillation. Fires are constantly occurring resulting in the destruction of the properties. A process of destruction has been going on since the beginning.”

(See also Burton, volume 16, p. 2643).

(b) They have been ready at all times to spend whatever amounts they considered that the prosperity of the business demanded, and have incurred what were apparently great risks, acting on their judgment of the requirements of the industry and belief in the ultimate success of their undertakings.

The amounts which they have expended in the construction of their refining plants have amounted to more than \$40,000,000 since 1882 (Def. Ex. 269, vol. 19, p. 627 ; J. D. Archbold, vol. 17, p. 3253). The amounts expended in the construction of pipe lines has been in the neighborhood of \$50,000,000, exclusive of the pipe lines of the Cumberland Pipe Line Company, The Prairie Oil & Gas Company, Ohio Oil Co., Standard Oil Company of California and the Crescent Pipe Line Company (Pet. Ex. 66, vol. 7, p. 164 ; Pet. Ex. 74, vol. 7, p. 172 ; Pet. Ex. 82, vol. 7, p. 180 ; Pet. Ex. 91, vol. 7, p. 189 ; Pet. Ex. 99, vol. 7, p. 197 ; Pet. Ex. 100, vol. 7, p. 198 ; Pet. Ex. 108, p. 206) ; Pet. Ex. 116, p. 232). More than \$16,000,000

have been invested since 1900 in the establishment of the refining business in California; with the refining plants, pipe lines, steamships, tankage and reserves of crude oil deemed necessary to insure success. The amounts constantly kept invested in crude oil carried in storage have been enormous. Some idea of the amounts can be gathered from the fact that over 85,000,000 barrels of crude oil are now carried in storage (J. D. Archbold, vol. 17, p. 3239). The thousands of marketing stations created by the Standard Oil interest since 1882 have been previously mentioned. The smaller stations vary in cost from \$1,000 to \$20,000 (H. M. Tilford, vol. 17, p. 3489). In the larger cities the equipment of a station sometimes cost as much as \$150,000 to \$200,000 (Moffett, vol. 3, p. 1143). Expenditures have been made on the same scale in establishing the marketing system in foreign countries. The plant of the Anglo-American Oil Company, Ltd., in Great Britain, including its steamships and sailing vessels, has cost over \$7,000,000 (Pet. Ex. 261, vol. 7, p. 490). The investments of the other foreign companies have been on a corresponding scale (Pet. Ex. 12-A, vol. 7, p. 36, Pet. Ex. 305 & 312, vol. 8, p. p. 650 & 662).

The risks which have been taken for the general good of the business will be best illustrated by the account hereafter given of the construction of pipe lines to new fields and the construction of storage tanks and the purchase and storage of surplus oil when the failure of the fields would mean the loss of the investment in the pipe lines, and if the production of the fields continued without diminution a great decline in the value of the stored oil would be certain. The most striking single instance, however, of the farsightedness of those interested in the Standard Oil business in taking risks which they deemed to be justified by the importance of the object aimed at, is afforded by the history of their dealings with Lima crude oil and the construction of the refineries at Lima, Ohio, and Whiting, Indiana.

When Lima oil was discovered it was not refinable by any process then known (Burton, vol. 16, pp. 2632-4). It was sold only for fuel and sold as low as 15c. per barrel (Burton, vol. 16, p. 2643). The Standard Oil Trustees at once organized the Buckeye Pipe Line Company and constructed pipe lines in the Lima field (Def. Ex. 271). The Standard Oil Companies

purchased all the Lima oil that was offered to them (J. D. Archbold, vol. 17, p. 3425). In 1888 their storage tanks held over 10,000,000 barrels and in 1890 over 20,000,000 barrels (Def. Ex. 289). It was not until 1890 that a process for refining Lima crude oil was developed to a point where it could be practically applied, and this process was not finally perfected until two or three years later (Burton, vol. 16, pp. 2635-6). The Standard Oil trustees, however, meanwhile, on the chance that their efforts to successfully overcome the difficulties presented by the Lima crude would be successful, had constructed the refinery at Lima and the great refinery at Whiting, Indiana. Even before the construction of the latter refinery a pipe line from Lima to Chicago had been completed. Mr. Archbold says in reference to the purchases of Ohio crude, (vol. 17, p. 3424) :

“ We did buy it, and it was another case of the far-sightedness of the Standard Oil interests with reference to the possibilities of the trade. We were willing to take that chance.”

He says again in respect to the construction of the refinery at Whiting (vol. 17, p. 3425) :

“ We started a refinery at Whiting in the hope that we would be able to refine it and failing to be able to make illuminating oil, we expected to take off the light portions from the crude and market the products in a divided way, as fuel and naphtha.”

(c) They have recognized the dependence of the petroleum industry on a continued supply of crude oil and the precariousness of the supply from any particular field, and have, regardless of expense, sought to reach, conserve and be in a position to utilize crude oil wherever obtainable.

The dependence of the oil industry upon a supply of crude oil and the precariousness of the supply from any particular field import into the business the great element of hazard that is peculiar to it and are the elements in the business that necessitate the constant expenditure of great amounts of capital if the business is to be permanent and successful. The

wisdom and ability shown by the managers of the Standard Oil Companies in recognizing the hazard and in taking adequate steps to minimize it have been perhaps the chief factor in the permanent success of the business, and the one which has enabled them to keep their original lead over all competitors.

The nature of the problem can be best shown by recalling a few of the facts that have already been referred to.

In 1882 the oil fields of Pennsylvania and New York were the only fields known to exist. The output of oil in that year reached more than 30,000,000 barrels but there was grave and general apprehension, apparently well-founded, that within a very few years the fields would be exhausted and the petroleum industry would come to an end. (See *ante*, p. 12). The production of Pennsylvania and New York has in fact declined until it is only a fraction of what it was in 1882 (Def. Ex. 265, vol. 19, p. 624). In 1882 the consumption of the refineries of the Standard Oil Company was already 16,500,000 barrels a year. The total output of the New York and Pennsylvania fields in 1905 was only 12,000,000 barrels and to-day would not be sufficient to supply the requirements of the Bayonne refinery of the Standard Oil Company (*id.*, Def. Ex. 269, p. 627). The territory that is now known under the general name of the Pennsylvania field includes not only New York and Pennsylvania, but also the fields of West Virginia and Southeastern Ohio. To-day the 136,000 oil wells in this entire field produce only 58,000 barrels of oil a day (Emery, vol. 6, p. 2744). If it were all available for use by the Standard Oil refineries, it would not be sufficient to meet the requirements of the Atlantic refinery at Philadelphia and the Bayonne refinery at Bayonne, N. J. (Def. Ex. 269, vol. 19, p. 627). It would hardly be adequate for the refineries of the Standard Oil interests as they stood in 1882. But the whole of this field is not available to the Standard Oil refineries; the Tidewater Oil Company, the Pure Oil Company and the majority of the other large independent refineries draw their supplies from this waning field, and in the aggregate take a very large proportion of the entire output (Benson, vol. 1, pp. 217-8; W. H. Tilford, vol. 1, p. 174; Tarbell, vol. 3, pp. 1429). The Standard Oil Company long drew its main supplies, not only for its western refineries but for its seaboard refineries from the fields of Ohio and Indiana, which are now

also on the wane, and from surplus oil stored in the Pennsylvania, Ohio and Indiana fields, which is now almost exhausted. It now draws the greater part of its supplies both for its western refineries and its seaboard refineries from the recently discovered fields in Kansas and Oklahoma and the field in Southern Illinois. Its Richmond refinery obtains crude oil through pipe lines from Southern California. Other refiners, either from lack of capital, lack of enterprise or shortsightedness, have allowed themselves to remain dependent upon the fields near which their refineries were originally located and upon the current production from those fields. Where they have constructed pipe lines, the longest of these, such as the United States Pipe Line, Tidewater Pipe Line and the Gulf and the Texas Pipe Lines, are each dependent upon the production of a single field.

The difficulty of the problem of insuring a constant supply of crude oil is due to conditions peculiar to the oil industry:

1. The tendency of producers to develop to a maximum the output of every newly discovered field ;
2. The increase of the output beyond the capacity of any existing means of transportation and beyond the amount for which there is any immediate demand ;
3. The rapid exhaustion of each field ;
4. The tendency of the producers to throw their oil on the market as soon as it comes out of the ground, due to their inability or unwillingness to hold it in storage ;
5. The hazards involved in constructing pipe lines and storage tanks and carrying oil in storage, which prevent the independent investment of adequate capital in the gathering, storing and transporting of oil.

The causes inducing a maximum from new fields are clearly explained by Mr. Archbold (vol. 17, p. 3249) :

"Q. Is there anything in that situation—I mean in the digging of new wells, the opening up of the new fields,—that compels a maximum production, by force of the very circumstances that exist there ? A. There is.

Q. Please tell us about that ? A. Indeed, the necessity for drilling wells after a field has been opened has been the curse of the producing business all through the years. Oil is struck on a property and the adjoin-

ing property at once start wells on theirs, and then the fighting of lines as to the sinking of wells, so as to get as much oil as possible from the underground reservoirs, is begun. And, as I say, that has resulted, in almost every section of oil production, in a great over-drilling and an unnecessary cost in the production of the oil as a whole. That is, a great many more wells are drilled than are really necessary to drain the territory.

Q. Where with respect to the neighboring land does the owner drill his wells? Where with respect to the dividing line between the two properties? A. There has not to my knowledge been any legal limit as to the drilling near to a line, but in most sections of the producing country there has come to be a common understanding among the producers (certainly producers of the more intelligent class) that they would not drill within a specified number of hundred feet within each other's lines, say two or three hundred feet.

Q. In Oklahoma, it is fixed at 150 feet, is it not? A. I believe it is.

Q. That is a Government regulation? A. I believe it is.

Q. The practice therefore has been for the owner of a tract of land to drill one well after another as close to that dividing line as it is possible for him to do so, has it not? A. It has.

Q. What effect does that have upon the neighboring owner of land on the other side of the line? A. It compels him also to drill a similar number of wells to offset those of his neighbor, or else have his territory drained by his neighbor.

Q. And the result of that is what, with respect to the wells on either side of such dividing line? A. The result is to greatly increase the cost of production and to take the oil out with undue rapidity.

Q. The result also is that each man drills as many wells as he can on his side of the line, does he not? A. He does.

Q. And you have on either side of that line then a chain of wells? A. Yes sir."

The over-production stimulated by the desire of each land owner to get the oil from his land before it is drained by wells on adjoining property is strikingly illustrated to-day in the conditions existing in the Kansas and Oklahoma field; the production has reached 170,000 barrels a day (J. D. Archbold,

vol. 17, p. 3251). The production is far in excess of the current demand; it is sold by the producers for anything they can get for it, a great part being used for fuel oil (Litchfield, vol. 16, pp. 2661-2699; Barnes, vol. 16, pp. 2716-7). The conditions existing in the Kansas-Oklahoma field are typical of the conditions that have existed throughout the history of the oil industry; in 1878 similar conditions led to the Petroleum Producers Union, whose manifesto is set out in the testimony of Mr. Emery (vol. 66, pp. 2750-2765). Similar conditions led to the shutdown movement of 1887 in Pennsylvania (Emery, vol. 6, p. 2739).

The rapid exhaustion of new fields is a necessary result of the over-production due to the causes referred to above. Defendants' Exhibit 265 shows how the general fields have waxed and waned. The testimony of Mr. Emery (vol. 6, p. 2744) already referred to shows the sudden development and subsequent rapid decline of the various local fields in Pennsylvania.

The fact that the self interest of the producers is not sufficient to induce them to hold back their oil when once produced until it can be bought in the ordinary course of trade, is illustrated by the conditions in the Kansas-Oklahoma field, already referred to. The producers sell their oil at whatever price they can get for it without reference to its value for refining purposes (Litchfield, vol. 16, pp. 2661 and 2699; Barnes, vol. 16, pp. 2716-7).

The hazards involved in the business of constructing pipe lines and storage tanks and gathering, storing and transporting oil have always prevented independent investments in that business in sufficient amounts to adequately provide for the needs of the industries dependent upon a continued supply of crude oil. The early pipe lines which were independent enterprises were utterly unable to provide an efficient service (J. D. Rockefeller, vol. 16, pp. 3094-6). Since their time there is no evidence that a pipe line has ever been constructed except as an adjunct to other branches of the oil industry.

The hazards that have deterred independent investors from engaging in either line of business are obvious. Gathering lines constructed to serve any particular field become valueless on the failure of that field and there is no way of telling how

long the production can be expected to continue (J. D. Archbold, vol. 17, pp. 3250-1; Emery, vol. 6, pp. 2742-3). Trunk lines lose their value with the decline of the production of the field they are built to serve, unless they can be utilized to serve some other field, for example: The Cumberland Pipe Line in Kentucky and that part of the Eureka Pipe Line which serves to connect the Cumberland Pipe Line with the general system will become valueless on the exhaustion of the Kentucky field. The National Transit Line and the New York Transit Lines owe their present value to the fact that they could be utilized to transport western oils to the seaboard in connection with the Buckeye and the Indiana Pipe Lines and the lines of the Prairie Oil & Gas Co. from Oklahoma to Griffith, Indiana. Except for the vast expenditure incurred in the construction of the latter lines, the Eastern lines would now be of comparatively little value.

The controlling consideration that must always deter independent investors from putting their money into the construction of pipe lines is the fact that in their nature they are adjuncts to other branches of the oil business.

Practical and mechanical difficulties that must prevent their successful operation as independent enterprises will be set forth elsewhere. Aside from these practical and mechanical difficulties it is necessary to the continuous and successful operation of pipe lines that great reserves of oil should be accumulated and held in storage (J. D. Archbold, vol. 17, p. 3239). Mr. Archbold testifies (vol. 17, pp. 3631-2) :

" Q. What relation, if any, has the stock of oil in storage in the various fields to the movement of the oil through the pipes of the pipe system ? A. The reserve stock of oil in the oil fields is essential to the steady operation of the pipe lines. They could not be dependent on the gathering of the oil from the wells day by day for their steady supply of oil for pumping through the trunk lines.

Q. Do you mean a steady, uniform supply ? A. A steady uniform supply. The reserve stock is used for that purpose.

Q. Has that any relation to the continuous and continued operation of the pipe system in so far as the movement of oil is concerned ? A. I should say it was essential to it.

Q. That is, the storage of oil throughout the different fields? A. The storage of the oil and the holding of a reserve stock."

The risk and expense involved in the purchasing and storage of crude oil are such that they have necessarily prevented independent investors from going into the business either as an independent business or in connection with the construction and operation of pipe lines. The iron tanks used for storage cost about 25 cents per barrel of storage capacity (Burton, vol. 16, p. 2642; J. D. Archbold, vol. 17, pp. 3239-40). They are built to hold the surplus in periods of flush production and are rarely filled but once (Burton, vol. 16, p. 2654). When emptied, they are of value only as scrap iron and are worth only from 6 to 7 cents per barrel of capacity (Burton, vol. 16, p. 2642). The oil in storage loses 2 or 3 per cent. of its volume the first year, the portion lost being the most valuable portions of crude. In subsequent years the loss by evaporation continues and the total loss may reach as much as 10 per cent. of the volume of the oil (Burton, vol. 16, pp. 2642-3 & 2646). The tanks have to be kept in repair; the danger of loss by fire is always present (Burton, vol. 16, p. 2643). The time during which the oil will have to be carried in storage before the decline of the fields or increase of demand affords an opportunity to dispose of it advantageously may be many years (Burton, vol. 16, p. 2643). The continued output of the fields or the discovery of new fields may postpone this time indefinitely. Meanwhile, the interest on the original investment in the storage tanks, the original cost of the oil and the expense for carriage must be borne by the investor. These considerations have deterred even the pipe lines constructed and operated as adjuncts to refineries other than those of the Standard Oil Company from undertaking the purchase and storage of oil in any considerable quantities (Litchfield, vol. 16, p. 2659).

The Standard Oil Companies have heretofore overcome the difficulties involved in securing and preserving a supply of crude oil for their refineries. To the fact that they have done so, not only the extension of their business but the preservation of their original investments is to be attributed. The story of the entry of the Standard Oil interest into the pipe

line business has previously been told (See *ante*, p. 29). In 1882 they had two pipe lines nearly completed to the seaboard, one through Pennsylvania and one through the State of New York. Also a trunk line to Cleveland, one to Buffalo and one to Pittsburg (Def. Ex. 282). They had previously made and were still continuing to make tremendous efforts to take care of the great output of the Pennsylvania fields. Mr. Emery says, (vol. 6, p. 2745) :

“ Every effort was given to the producers that was in the power of the Standard Oil Company, or anybody else, to take care of the product. No complaint on that part. They have been as faithful people as ever were in the world to take care of the product.”

The Standard Oil Companies foreseeing the time when the decline in the output of oil would jeopardize the industry, bought the surplus oil for which there was no immediate use and built storage tanks to take care of it until the amount in storage in the Pennsylvania field amounted to upwards of 40,000,000 barrels (J. D. Archbold, vol. 17, p. 3239). With the decline of the Pennsylvania fields the stocks in storage have been drawn upon until now there is no longer any oil stored in Pennsylvania (Emery, vol. 6, p. 2741). In 1886 the Lima field in Ohio was first developed. As soon as the problem of refining the Lima oil was solved a trunk line was constructed from Mantua to Cygnet connecting the gathering lines of the Buckeye Pipe Line system and the Lima and Chicago Line, which had been already constructed with the branch of the National Transit Lines extending from the Pennsylvania field to Cleveland (J. D. Archbold, vol. 17, p. 3423 ; See Cygnet Pipe Line, Def. Ex. 272). The Standard Oil Company were then in a position to supplement the supply of Pennsylvania crude oil at the seaboard with Lima crude. The West Virginia oil fields were developed in 1891 (Def. Ex. 265, vol. 19, p. 624). Gathering lines were constructed in the field and a trunk line was built from the West Virginia field to the seaboard to bring the West Virginia oil to the seaboard refineries (Def. Ex. 271, Eureka Pipe Line ; Southern Pipe Line ; J. D. Archbold, vol. 17, p. 3233). Gathering lines

had already been constructed in Southeastern Ohio (Def. Ex. 272, Macksburg Pipe Line). In 1891 the Indiana field became important and gathering lines were constructed in Indiana and connected with the general pipe line system (J. D. Archbold, vol. 17, p. 3234). The West Virginia, the Lima and the Indiana field are all on a decline (Def. Ex. 265). The Standard Oil interests had at one time in storage in the Lima and the Indiana fields over 23,000,000 barrels of oil (Def. Ex. 289). By the end of 1907 the amount of oil in storage had fallen to a little over 3,000,000 barrels (*id.*)

The great investments of the Standard Oil Companies in refining plants and pipe lines would have depreciated to a fraction of their present value but for the discovery of the mid-continent field, and the construction of the great pipe line from Oklahoma to Chicago.

Upon the development of the Kansas-Oklahoma field, the lines of the Prairie Oil & Gas Company were constructed from Oklahoma to Griffith, Indiana, connecting with the general system of Standard Oil pipe lines and enabling the Standard Oil Company to supply its refineries at the seaboard with oil from Kansas and Oklahoma (J. D. Archbold, vol. 17, p. 3234). The refinery at Whiting, which theretofore had used oils drawn from the Lima field, began using Western oil and the declining production of the Lima field and the remaining stocks were made available for use at the seaboard (Burton, vol. 16, p. 2641). The Prairie Oil & Gas Company has bought and stored in Oklahoma over 40,000,000 barrels of oil (Litchfield, vol. 16, p. 2659).

The Kentucky field was developed after 1900 and the Standard Oil Company's system of pipe lines was at once extended to this field (J. D. Archbold, vol. 17, p. 3234: Def. Ex. 271, Vol. 19, p. 633). The field, however, has never reached considerable proportions. The last great field to be opened was the Illinois field in Southern Illinois. The Ohio Oil Co. about 1906 constructed pipe lines in this field. Like the Prairie Oil & Gas Co., the Ohio Oil Co. was a producing company entirely owned by the Standard interest. Until it entered the Illinois field, it had no pipe lines (Chesebro, vol. 3, p. 1403). It plays the same part in the Illinois field that the Prairie Oil & Gas Co. plays in the mid-continent field. In California the Standard Oil in-

terests have pursued the same policy of storing oil for future use and making it available by construction of pipe lines to refineries that has been pursued in the Eastern States. On December 31, 1907, they had nearly 13,000,000 barrels of oil in storage in California (H. M. Tilford, vol. 17, p. 3496). The pipe line through which this oil is carried to the refinery at Richmond, Cal., is from 350 to 400 miles long (H. M. Tilford, vol. 17, p. 3491).

The relation of the development of the pipe line system to the continued prosperity of the business is well stated by Mr. Archbold (Vol. 17, pp. 3297-8) :

"Q. Mr. Archbold, do you know why the Standard Oil interests have so vastly extended their pipe line system during the years, if you please, that you have been connected with the organization? A. I think I do.

Q. Will you please state it? A. The pipe lines are an absolutely necessary adjunct, a necessary part of the business as a whole. The volume of the business as a whole has entirely outgrown the possibilities of railroad transportation, and the transportation by pipe is a more convenient method in every way; and in the construction of the large refineries necessary for the doing of the business pipe lines of a necessity had to be created in order to insure them a regular supply, a sure supply, of crude oil. They have become a part of the great scheme of the business with reference to reaching the markets, and they are essential in their use.

Q. Just what is the relation of the pipe line to the refinery? A. It is the feeder of the refinery. It is the means by which the crude oil is brought to the refinery. There are no facilities in existence other than the pipe lines that would be even approximately adequate to the business, and the railroads of the country could not today, even if the tank cars were in existence (which of course they are not), do the business so as to keep the refineries in regular operation. They are a part of the whole.

Q. When you used the phrase 'a part of the great scheme of the business,' I understand you to mean by that a part of the scheme in the building up of the Standard Oil business. Am I correct about that? A. Yes; and of the physical operation.

Q. That is to say, you have been directing your attention, as I understand your answers, to the building up of the Standard Oil business and its scheme of doing

business, its methods of doing business and its necessities ? A. Yes.

Q. Would it have been possible, Mr. Archbold, in your judgment, to have developed the refinery construction of the Standard Oil interests to the extent that it has been developed, without the aid of the pipe lines as a part and parcel of that refinery development ? A. I do not think it would.

Q. Why ? A. I think it would have been a physical impossibility for the railroads to have handled the business in the enormous volume that has been developed within the past decade or more. * * *

Defendants' Exhibit 268 (vol. 19, opp. p. 627) shows graphically how the Standard Oil Companies through the policy of extending their pipe lines and storing surplus oil have been able constantly to meet the increasing demands of their refineries notwithstanding the fluctuations in the total volume of production ; and notwithstanding the shifting in the sources of production and the great variations in particular fields shown in Defendants' Exhibit 265 (vol. 19, p. 624). The same policy has enabled them to continue to utilize to their full capacity the pipe lines from the Pennsylvania, the Lima and the Indiana fields to seaboard, long after the decline of the fields they were constructed to serve.

Thus the Standard Oil companies have, as far as possible, minimized the chief hazard of the oil industry.

(d) The Standard Oil interests have shown great soundness of judgment in the selection of points at which to establish their refineries and have concentrated their refineries at these points.

The Standard Oil Company has concentrated its refineries at a few points on the Atlantic seaboard, to wit : New York, Philadelphia and Baltimore ; at three points on the Great Lakes : Buffalo, Cleveland and Chicago ; at a few interior points which afforded peculiar facilities ; they have solved the problem of reducing to a minimum the cost of distributing the products of their refineries, while at the same time handling their crude oil at a minimum cost and securing the advantages of concentration in management. In carrying out this policy they have given up refining at points like Boston and Portland, where it was difficult to obtain an adequate supply of crude oil. They have abandoned refineries like the Imperial refinery at Oil City, where the demands of the local trade could be sufficiently met

from other refineries, and adequate facilities for the economical distribution of the products were lacking. Other refineries have been moved to larger refineries and the works concentrated in order to promote economy in management. The Bush & Denslow Works were moved bodily from Brooklyn to Bayonne and combined with the Bayonne Works of the Standard Oil Co. of New Jersey (Def. Ex. 282). The refinery at Galatea, Ohio, was removed to Lima and combined with the works of the Solar Refining Co. (J. D. Archbold, vol. 17, p. 3337). The works of the Empire Refining Company and the Central Refining Company, Ltd., have been combined with Sone & Fleming Works (Def. Ex. 272). The policy of consolidation has been consistently pursued both in respect to works originally owned by the Standard Oil interests and such works as they have, from time to time, purchased (J. D. Archbold, vol. 17, pp. 3332-3, 3335-6, 3339). In respect to the policy pursued by the Standard Oil Company in selecting the sites for its refineries Mr. Archbold testifies (vol. 17, pp. 3253-3255) :

"Q. Mr. Archbold, what has been the policy of the Standard Oil interests with respect to the location of their refineries? A. It has sought to locate its refineries with reference to the most economical operation possible, in the securing of its supply of crude oil, and in all the supplies which enter into the question of the manufacture, and also as to the distribution of the manufactured products to the consuming trade. It has therefore located in the larger centres of the Middle West and at such other intermediate points as would supply a considerable portion of the domestic territory, and then at the Atlantic seaboard for the export trade and for the domestic trade of the eastern section.

Q. Can you illustrate that by stating specifically the reasons that controlled in the location and construction of the refinery at Whiting, Indiana? A. Whiting, Indiana, is a suburb of Chicago, and at Chicago we had the great railroad systems of the country radiating to the West and the Northwest, and indeed to the Southwest. We had also the water transportation by the Lakes to a very important section. It was considered an advantageous point for a large refinery, and one of the largest in existence is located there.

Q. And what was its relation to the crude oil fields?

A. It was contiguous to the fields of Ohio and Indiana, and has, of course, proven of great advantage also for the Illinois field, which has more recently opened.

Q. Have any of your competitors located a refinery or refineries anywhere in that neighborhood? A. Not immediately in that neighborhood, but they have located in the oil fields to which I have referred—that is, in the Illinois and the Ohio fields—quite a number of them. Shall I go on and speak of other localities?

Q. If you please, yes. A. We located, of course, in California with reference to the production of oil there and the distribution of oil to the domestic trade on the Pacific Coast, and with a view to extending the export trade from there to the Orient. We located in Kansas with a view to the domestic trade of that section. We located near Kansas City, Missouri, at Sugar Creek, with a view to the trade of the Southwest, as was also true at Alton, near St. Louis.

Q. Kansas City is, and has been for many years, also a great railroad centre? A. Kansas City is a great railroad centre, and at North Alton (which is practically St. Louis) we have the trade of that great southwestern section radiating from St. Louis.

Q. Now, what about your policy with respect to the development of your seaboard refineries. A. Our seaboard refineries, as I say, are built with reference to the domestic trade of the Atlantic coast line and to the foreign trade and to such trade as can be reached advantageously from here. There is, of course, from the great cities on the Atlantic seaboard a very large domestic trade, not only in illuminating oil, but in all the by-products, more especially in the light products, naphtha and gasoline, which have come into very great use during the past several years. We have had no other thought in all this than to accomplish the best possible results in economy in the location and operation of our refineries, with a view to cheapening the product as much as possible.

Q. Can you give us some idea of the development of the Bayonne refinery, which at present is your largest seaboard refinery, comparing that refinery now, if you please, with what it was in 1882? A. The growth has been something enormous. I could not, without the statistics on the matter, give you the exact figures.

Q. I see that its present yearly capacity is 13,840,435 barrels. A. Yes sir.

Q. Was it very smaller than that in 1882? A. Oh, only a fraction of that, I should say.

Q. Are there any advantages in connection with domestic trade that accrue to these seaboard refineries? Take the coast trade, if you please? A. I should say that there was an advantage in a seaboard refinery in the disposition of our by-products, as we term them. The centers of population are very large users especially of the light products, namely, the naphthas and gasolines, which, as I say, have come into such enormous use during the past several years for gas making and for automobile purposes and for the various uses to which they have been applied.

Q. Is all of the oil which is manufactured in your seaboard refineries conveyed to those refineries by pipe lines? A. All or substantially all.

Q. You stated yesterday among other things, I think, that some oil was transported to Bayonne by pipe line as far as from the mid-continent field, did you not? A. Yes sir. I should say a continuous line of 1600 or 1700 miles."

In 1908 the Standard Oil Co. of California sold to the Standard Oil Co. of New York for transportation to the Orient over 1,000,000 barrels of oil (H. M. Tilford, vol. 17, p. 3495), and the entire Pacific Coast trade since the construction of the Richmond refinery has been supplied from that point, saving the cost of transportation across the continent (H.M.Tilford, vol. 17, pp. 3493-4). The oil for distribution in the greater part of New England is transported from the New York refineries by water in bulk (King, vol. 3, p. 1501). The trade on the South-Atlantic coast is supplied in the same way. Export oil can also be shipped from seaboard refineries in the same economical manner.

(e) *They have developed their marketing system for the economical distribution of the products of their refineries with results that have fully justified the great expense involved.*

The introduction of the system of marketing stations, to which oil is transported in bulk from the refineries by means of tank cars and from which the oil is distributed to the retail trade by tank wagons, has revolutionized the methods of marketing illuminating oil. The increase in the number of marketing stations from 130 in 1882 to 3573 in 1906 has already been mentioned. Def. Exs. 263-4 show in striking fashion the extent to which the marketing stations have been increased since 1888. Mr. Archbold testifies in respect to the

change in marketing methods that has brought about this great multiplication of stations (vol. 17, p. 3244), as follows :

" Q. Can you tell us the essential difference between the marketing methods in so far as the sale of refined oil is concerned to-day and what it was in the eighties—in 1882, if you please ? A. In 1882 and up to that period the distribution, as I have already said, was largely made in barrels, and the wants of the trade throughout the country were met in a spasmodic and uncertain way. We realized, as the business grew, that that feature of the trade especially needed improvement. It was often true that the local jobber in the first instance exacted an extortionate profit or an exorbitant profit, and then it was also further true that the retailer exacted an exorbitant profit, and all this resulted in complaint the country over as to the price which the consumer was obliged to pay for the article, and our effort was to improve the facilities so as to come as close to the consumer as possible, and with that end in view we established the station system, which developed from the barrel to the bulk delivery ; that is, the carriage of oil to the station in bulk cars, tank cars, and its distribution from there, as the trade developed, in bulk wagons to the consumer as nearly directly as possible. In all this we were actuated of course by a desire to extend our trade and increase the consumption of the article. Of course it incidentally was a great benefit to the consumer, in that it cheapened the price to him.

Q. That method of marketing, as compared with the old method, introduced economies all along the line, did it ? A. Oh, yes. The shipment of oil by barrels was expensive in every way. The cost of the barrel, its depreciation, and the freight on the barrel back to the point where it could be again filled all involved an expense that was very great, and the improvement in the methods of handling the oil to the consumer as a whole resulted in greatly minimizing the cost."

* * * * *

(Vol. 17, p. 3468.)

" Q. Can you tell us, right there, in a few words, what change the Standard Oil interests inaugurated in marketing methods and in their manner of reaching the trade, just about this time, and their relation, if any, to this process that resulted in the elimination of

the middleman? A. The change came about through the inauguration of the bulk system throughout, namely, the transportation to the distributing station by bulk cars, and from there by bulk wagons.

Q. To whom? A. To the consumer; to the retailer. And of course it did away with the leakage incident to barrel transportation—to the double transportation by barrel, and to the barrel itself as a perishable investment incident to the business. It made much more available to the trade the supply of oil, made it more regular and easier of delivery, and cheapened it to the retailer. It was a direct benefit to the consumer, in the cheapening process, in the improved method."

(f) They have established great foreign marketing companies to enable them to meet the competition of foreign oils and have introduced their marketing system into nearly all foreign countries, and the success of this policy has been such that over 63 per cent. of their illuminating oil is sold abroad.

In 1882 and many years thereafter oil destined for export was sold at the port of shipment and consigned to buyers in foreign countries. No system had been established for marketing the oil abroad. The companies which now act as marketing agencies for the Standard Oil Company in foreign countries have all been created since 1888. The system of marketing that has been established in this country has now been introduced or is being introduced in all the principal countries of the world (J. D. Archbold, vol. 17, p. 3290; Def. Ex., 271). The export business has been built up in the face of great obstacles. It has had to encounter severe competition from foreign oil fields and the fact that so large a proportion of the world still uses American Oil is chiefly to be attributed to the efforts of the Standard Oil Company (J. D. Archbold, vol. 17, p. 3289, Def. Ex. 275-6, vol. 19, p. 654-660).

(g) They have made great efforts to solve the problem of refining refractory oils and through the success of these efforts they have been able to utilize to their great advantage oils that otherwise were useless except for fuel purposes.

The Lima crude oil, when first discovered in 1886, could not be refined by any process then known. The oil along the northern fringe of the field near Toledo contained a comparatively small amount of sulphur and from this a merchantable oil could be made; the proportion of sulphur in the oil rap-

idly increased towards the South and much the larger part of the product of the field was regarded as useless, except for fuel purposes (Burton, vol. 16, pp. 2632-4, 2636-7 & 2643). In June 1889 one of the Standard Oil refineries at Cleveland was set aside as an experimental plant to be used for the purpose of developing a method of removing the sulphur from the Lima oil (Burton, vol. 16, p. 2633). The experiments at this refinery were conducted under the charge of Mr. Hermann Frasch and Mr. William M. Burton. Other employees of the company were engaged upon the problem at other works (*id.*). The nature of the problem and the way in which it was solved is stated by Mr. Burton, vol. 16, pp. 2633-4:

“ To begin with, the crude oil occurring in northern and central Ohio contained from $\frac{2}{15}$ of 1 per cent to 1 per cent of sulphur by weight, which was several times as much sulphur as occurs in the best grades of Pennsylvania crude. When the crude was refined for making refined oil and gasoline, the sulphur carried along into these refined products, and when burned in lamps or used in other ways, produced very disagreeable effects in the room, in which the lamp was burning, smudging the chimney and making a very bad wick crust. The process which was devised by Mr. Frasch for overcoming this consisted in distilling the oil in the presence of black oxide of copper, by which the copper took up the sulphur, forming sulphide of copper. This sulphide of copper was subsequently roasted back to oxide and used repeatedly. * * * The difficulty was in securing a practical method for restoring the copper sulphide to the oxide condition. * * *

“ If the copper sulphide had been discarded after each proposition, it would have made the process entirely out of the question from an economical standpoint, on account of its great expense. * * * In the beginning the problem was to restore the copper to an oxide condition cheaply. * * * That was finally secured by inventing a roasting furnace for that particular purpose.”

The Frasch copper oxide process, the roasting furnace invented by him and the still in which the application of the oxide to the oil took place, were all patented (Burton, vol. 16, p. 2635). The Frasch process is the only process by which a

good illuminating oil has ever been produced from the Lima or Indiana crude, excepting only the small portion of the product of the Lima field coming from the neighborhood of Toledo (Burton, vol. 16, pp. 2636, 2640-1). Since 1890 it has been used by the Standard Oil companies and they alone have been in a position to utilize the greater part of the products of the Lima-Indiana field. Until 1906 the Whiting and Lima refineries used Lima oil exclusively (Burton, vol. 16, pp. 2641-2). The process was also used at Cleveland, Ohio, and a copper revivifying plant was installed at Bayonne refinery (Def. Ex. 280, vol. 19, p. 671). The process, after its first discovery, was improved so that the cost of refining was reduced and the yield of illuminating oil was increased from 30 per cent. to 45 per cent. (Burton, vol. 16, p. 2635). The cost of conducting the experiments leading to the discovery of the Frasch process was several hundred thousand dollars (Burton, vol. 16, p. 2636).

The total production of the Lima and Indiana fields down to the end of 1905 was more than a quarter of all the crude oil that had been produced in the United States from 1859 to that date. The profits of the Standard Oil Co. from the discovery of the Frasch process by which this great output of oil, practically useless to all others, was rendered for its use almost as valuable as Pennsylvania oil, were necessarily large.

The oils produced by the California fields presented problems almost as difficult as the oils in Lima and Indiana. Prior to 1900 there were a number of small refineries located in California, but the crude was of such a character that they were unable to produce from it a good illuminating oil (H. M. Tilford, vol. 17, p. 3494). The oil produced had to be mixed in the proportion of 30 per cent of California oil with 70 per cent of Eastern oil, in order to obtain a marketable article (*id.*). Eric A. Starke was a chemist employed by the Pacific Coast Oil Company. On behalf of that company, after its stock was bought by the Standard Oil Company, he experimented with the California oil and succeeded in producing from it an illuminating oil which could be used for all purposes to which such oils ordinarily applied (H. M. Tilford, vol. 17, p. 3494). The process invented by Mr. Starke is a patented

process owned by the Standard Oil Company of California, and the Standard Oil Co. of California, through the use of the process, refines from 28,000 to 30,000 barrels of crude oil per day and supplies with the product the entire Standard Oil trade on the Pacific Coast, which previously had been supplied with oils brought from the East and also supplies over a million barrels of oil a year for shipment to the Orient (H. M. Tilford, Vol. 17, p. 3495).

The production of crude oil in California in 1900 was a little over 4,000,000 barrels a year; in 1907 it had reached 40,000,000. By reason of the discovery of the Starke process and the great investments made by the Standard Oil interests in California for the application of that process, the Standard Oil interests have been able to utilize this great volume of oil and to obtain therefrom illuminating oil and all the other products of petroleum. Mr. H. M. Tilford testifies:

"Q. When these new fields were discovered and this large flow of oil began in 1901 and 1902, what did the Pacific Coast Oil Company do with respect to the manufacture of that oil into a marketable product? A. It started to build a refinery at Richmond, and built a pipe line from the producing field to Richmond, with the idea of utilizing a portion of it in making different petroleum products.

Q. Yes, but what did you do in connection with manufacturing improvements? Do you know what the Starke process was? A. We had men from different sections of the country that we sent out to California and thoroughly tested the crude oils, and eventually we were able to make an oil which we considered merchantable.

Q. Who was Eric A. Starke? A. A chemist employed by the Pacific Coast Oil Company.

Q. When employed? A. He was in their employ when we acquired the stock of the company.

Q. Did you retain him? A. He is still in the employ of the Standard Oil Company.

Q. Did he succeed in effecting any improvements? A. He did.

Q. In connection with the manufacture of California crude oil into refined oil? A. He did.

Q. In what way, and what effect did that have upon the product? A. It improves the burning quality of the illuminating oil.

Q. To what extent? A. Made it a merchantable article, which it was not before.

Q. Do you mean that it was made a merchantable article so that it could be used without uniting it with eastern oils? A. Yes, sir; it could be used for all purposes where illuminating oil is, such as burning in lamps, stoves and heaters.

Q. Theretofore, before the introduction of the Starke process and its utilization by the Standard Oil interests there (the Pacific Coast Oil Company), this California crude had to be united with the eastern oil in the proportion of 30 of California oil to 70 of eastern oil, in order to get a marketable oil, I understand you to say? A. Not the crude oil. The refined oil, which was made from the California crude, had to be 30 per cent. of California refined oil mixed with 70 per cent. of eastern refined oil.

Q. But after the development of the Starke process you were able to manufacture refined oil from the California crude without any mixture at all with eastern oil? A. Yes, sir.

Q. And are you doing that now? A. We are doing it to-day.

Q. What relation did those improvements have to the extension of the business there? A. It resulted in all the Pacific coast trade being supplied with oil manufactured from California crude oil, while before the oil had to be shipped from the East.

That Starke process was a patented process, was it? A. It was a patented process; yes, sir.

Q. Owned by whom—the Standard Oil Company of California? A. Owned by the Standard Oil Company of California.

Q. How, then does the refined oil which the Standard Oil Company of California now manufactures under the Starke process compare in quality with the refined oil manufactured by competitors in California? A. We consider it a very much superior oil to that manufactured by other refineries in California.

Q. I understand you to say that the Pacific Coast Oil Company was purchased in 1901 for \$761,000. Do you remember what the net assets of the Standard Oil Company of California were on December 31, 1906? (Handing witness a paper.) A. The net assets of the Standard Oil Company of California on December 31, 1906, were \$21,329,952.30.

Q. Made up of what? A. Do you want the details of it?

Q. Yes, please. A. Marketing plant, merchandising plant, manufacturing plant, producing plant, pipe lines,

including tankage connected with the pipe lines, floating equipment, and other assets; stocks of oils.

Q. What do you mean by 'floating equipment'?

A. Boats, steamers and barges.

Q. I notice that you have here 'Other assets, \$9,303,054.70.' Does that largely consist of crude oil in storage?

A. Yes, sir; stocks.

Q. So that plant has been developed in the last seven years from a plant of the value of \$761,000 to a plant of the value of \$21,000,000, has it?

A. It has.

Q. Who has done that?

A. The Standard Oil Company" (H. M. Tilford, vol. 17, pp. 3493-3495).

The perfection attained in the lubricating oils for railroads is even more remarkable than the development of the Frasch process and the Starke process. The facts demonstrating that the success of the Galena oils is due solely to their extraordinary merit are set out at length in that part of the brief treating of the Galena-Signal Oil Company. The facts in the case of the Galena oils may be taken as typical of the superiority of other Standard Oil products where the general use of such products is shown, and no fact other than their superior merit is adduced to account for such general use.

(h) They have been unremitting in their efforts to improve the processes of refining, to diversify the useful by-products to be obtained from the refining of petroleum and to introduce them into general use, and these efforts have resulted to their great advantage as well as to the general benefit of the industry and the public at large.

The quality of illuminating oil has been greatly improved (J. D. Archbold, vol. 17, p 3411). In the early history of the refining business it was carried on almost solely with reference to illuminating oil, the by-products being little used for commercial purposes (J. D. Archbold, Vol. 17, p. 3255). Mr. Archbold (vol. 17, p. 3256) says:

"I may say that the work of developing these various products has been continuous all through the years and has been a distinctive feature of the Standard Oil method and effort. We have employed the very best expert talent obtainable at all times, both lay and professional, in experimenting for the production of useful articles from the by-products, as a by-product of petroleum. We have brought into our service the best h emical talent obtainable, not only from this country

but from Europe. Every considerable refinery has been provided with its laboratory and its room for experimenting, and, as I say, these experiments in the distillation of petroleum and the chemical talent together have been constantly at work on these problems."

The products other than illuminating oil now obtained from petroleum are great in number, their value and importance exceeding the value and importance of the illuminating oil obtained (J. D. Archbold, vol. 17, pp. 3255-6). The efforts of the Standard Oil Company have played a very important part in the discovery of these by-products and a still more important part in the development of them and their introduction into general use. After 1882 the naphtha and tar obtained in the distillation of petroleum were still burned as fuel under the boilers (J. D. Archbold, vol. 17, p. 3257). The naphtha and gasoline are now worth per gallon three or four times as much as illuminating oil (*id.*). Naphtha and gasoline were first practically utilized in the making of illuminating gas. Their use for this purpose was actively promoted by the Standard Oil interests (*id.*). In 1884 the Gilbert & Barker Company in Massachusetts was purchased by the Standard Oil interests (Def. Ex. 271). Its business is the manufacture of apparatus for the utilization of naphtha in the manufacture of gas (*id.*). Between 1895 and 1897 in a comparatively small part of the territory in which the Standard Oil Companies operated over \$250,000 was spent in advertising and introducing stoves adapted to the use of gasoline, with a view to promoting the consumption of that product of petroleum (Drake, vol. 17, pp. 3535-7). The world's supply of candles was formerly produced from tallow, coal shale, beeswax and sperm oil. The use of candles made from these materials has been almost entirely supplanted by candles made from petroleum wax. In 1892 the Standard Oil refineries sold about 3,000,000 pounds of candles. In 1907, 22,500,000 pounds (J. D. Archbold, vol. 17, pp. 3476-7). Petroleum wax, aside from its use for the manufacture of candles, has been introduced into general use for a multitude of purposes, for example: treating of stone for its preservation, covering tops of fruit jars, and other equally dissimilar uses. In 1892 the Standard Oil Company sold 74,000,000 pounds of wax products of all kinds. In 1907

241,000,000 pounds. (J. D. Archbold, vol. 17, p. 3476). The growth in the use of petroleum wax has been particularly marked in foreign countries, and by its use products of foreign countries have in great measure been supplanted by products of American origin (J. D. Archbold, vol. 17, 3476). The case of petroleum wax has been selected as a typical instance of the development of the petroleum industry and the expansion of American trade, due chiefly, if not entirely, to the efforts of the Standard Oil Company.

(i) They have, throughout the history of the business, acted upon the principles which were characteristic of the original business of Rockefeller, Flagler & Andrews. They have, wherever practicable, acquired facilities of their own for the transaction of their business, instead of relying upon the use of such facilities from others. They have, as far as practicable, manufactured for their own use everything necessary for the proper conduct of their business. They have in every department of their business and throughout the vast territory in which it is carried on enforced rigid economy and demanded from all their employees the most earnest attention to all details of the business. They have stimulated every employee to conduct his department of the business with the same energy and fidelity as though engaged in a private enterprise of his own.

They own their own tank cars (Def. Ex. 108, vol. 18, p. 274; Union Tank Line, Def. Ex. 271, vol. 19, p. 633; Pet. Ex. 12-B, vol. 7, p. 46). They own their own barges and steamships (Standard Oil Co. of New York, Pet. Ex. 273-A, vol. 8, p. 552; Anglo-American Oil Co. Ltd., Pet. Ex. 261, vol. 7, p. 490; Atlantic Steamship Company, Def. Ex. 271; Standard Oil Co. of California, Pet. Ex. 271, vol. 8, p. 519). They have erected their own chemical works for manufacturing acid and for separating and restoring acid, so that it can be used again (Def. Ex. 280, vol. 19, p. 671). They have their own cooperage works and plants for making barrels, cans and the shooks for making the cases in which the cans are shipped (Interstate Cooperage Company, Def. Ex. 271; Oswego Works, Def. Ex. 272; Def. Ex. 282; Devoe Works, Pet. Ex. 273-A, vol. 8, p. 555).

The policy of rigid economy followed by the company, the close watch kept of the results obtained in all parts of the business, while leaving those in charge of the various depart-

ments free to exercise their best judgment, and the stimulus to all employees to exercise their efforts for the common good of the business as though each were engaged in his own independent enterprise, appears so fully throughout the case that the citation of the evidence of particular witnesses is unnecessary. The system of reports, which show from day to day the most minute particulars of the business conducted in every part of the vast territory over which the Standard Oil Company operates and on which the Government relies for a great part of its evidence, is perhaps the most concrete illustration of the perfection of the business methods to which the success of the Standard Oil business is in great part due, but the record is full of evidence of the way in which the business has been systematized and every department developed to the highest possible condition of efficiency.

(j) *The sagacity with which the business as a whole has been conducted, has been of a very high order; the great apparent risks that have been taken have usually been justified by the existing conditions, and in nearly every case have been justified by the result.*

The repeated discovery of new oil fields has heretofore enabled the Standard Oil Companies not only to continue their refineries in full operation, but to continually increase their capacity. The location of the new fields has been such that the existing pipe lines could be utilized to bring the product to seaboard. The remoteness of the principal foreign fields from the chief centres of population has enabled them to retain and continually increase their export trade. The discovery of the Frasch process made the great investments in Ohio oils very valuable. In all of these cases the sagacity that correctly estimated probabilities is to be admired. The petroleum industry has been at all times and is to-day a business of extra hazard and the great investments of the Standard Oil Companies have been at all times and are now at the risk of conditions which cannot be controlled. The past success of the Standard Oil business and its profits to-day are in great part the reward of men who have been willing constantly to increase their stake upon the chance of subsequent conditions favorable to the continued success of their business.

CHAPTER III.

EARLY CONTRACTS.

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There is no evidence whatever in the case that the constituent factors of the Standard Oil business were acquired or held together by the common owners for the purpose of restraining trade or monopolizing commerce or for any other purpose than the legitimate development and proper conduct of the business owned in common. The charge that the owners of the business sought to keep competitors out of the field, and that such efforts contributed to the acquisition of constituent factors of the business and to its growth and development, is without foundation.

The constituent factors of the business, so far as they are the result of acquisitions, had all been acquired prior to the trust agreement of 1882. All the acquisitions essential to the general scheme of the business had been made by the end of 1874 and nearly all that are important before the end of 1877. The purpose of each such acquisition and its relation to the scheme of the business as a whole has been fully set out in the history of the development of the Standard Oil business. There is nothing to suggest that in any case there was any object beyond the legitimate advantage to the business that would result from the acquisition, or that the properties have been kept together for any but a legitimate purpose.

The charge, that the expansion of the business in the past has been facilitated by efforts to drive competitors out of business, to induce them to sell their properties, or to restrict their business, is perhaps irrelevant. Such efforts if made were merely collateral to the legitimate development of the business. The charge that they were made does not bear upon the question whether the present ownership of the different factors of the business by the Standard Oil Company (New Jersey) or the conduct of its business restricts freedom of trade or impairs the rights of anyone. The

relevancy of the charge is, however, a matter to be discussed in the briefs on the law of the case. The charge, in fact, is unfounded. The evidence as to the acquisition of the various constituent factors in the business contains no suggestion that any single one of them was acquired through any coercion or any unfair advantage or otherwise than as the result of fair negotiation on equal terms. The record is bare of any evidence to show that the past development and expansion of the Standard Oil business has been due to the restriction of competition either by contract or by interference with the operations of competitors; and the suggestion that there has been any general policy or disposition to destroy or restrict the business of competitors, in order to facilitate its expansion, is wholly unwarranted.

FIRST. The charge, that prior to 1882 refineries were driven out of business and refineries and pipe lines acquired through railroad rebates and discriminations, is not sustained, nor do the railroad arrangements cited in support of it evidence any policy or disposition to injure the business of competitors.

The only evidence adduced in support of the charge are certain railroad arrangements; and the fact that the Standard Oil interests purchased at various times a good many refineries. The only arrangements to which the Standard was a party were subsequent to the acquisition by it of the chief constituent factors in the business, and there is no evidence to indicate that it obtained any of its properties by means of such arrangements or that it derived any illegitimate advantage therefrom or that its competitors were hampered or injured thereby. The inference that the injury of its competitors was the object of the arrangements is wholly unwarranted. In 1882, they had ceased to be operative.

The Bill of Complaint charges :

1. That the defendants were enabled to and did crush out competition, acquire competing refineries and bring about agreements or combinations restricting trade through obtain-

ing rebates, preferential rates, and largely by the same means, obtained control of pipe lines. The bill specifies as the transactions on which the charge is based.

(a) The South Improvement Company enterprise of January, 1872.

(b) The terminal arrangements with certain railroads, the first of which was made with the Erie in 1874.

(c) The Pipe Line Pool Agreement of 1874.

(d) An arrangement with railroad lines extending West from Cleveland.

(e) Contracts with the Erie, the New York Central and the Pennsylvania in 1875, allowing a 10% rebate.

(f) Preferential rates given by the Erie and New York Central roads in 1876 for the alleged purpose of enabling the Standard Oil Company to acquire the refineries and pipe lines of the Empire Transportation Company.

(g) The contract of 1877 with the Pennsylvania Railroad and similar contracts with the New York Central and the Erie.

(h) The Agreement between the Pennsylvania Railroad and the American Transfer Company in 1878 and similar agreements with other roads.

(i) Additional rebates allowed by the Pennsylvania R. R.

It is alleged that the rebates and discriminations under these arrangements continued until January, 1880.

The only terminal arrangements, of which there is any evidence, are those with the Erie and the New York Central. There is no evidence whatever of the alleged arrangements with the Western roads. There is no evidence as to the terms of the alleged contracts of 1875 with the Pennsylvania, the New York Central and the Erie; or as to the alleged contracts of 1877 with the New York Central and the Erie; or as to the alleged arrangements between the New York Central, and the Erie, and the American Transfer Company and no competent evidence as to the alleged additional rebates paid by the Pennsylvania.

1. The South Improvement affair has no bearing whatever on the plans and purposes of the stockholders of the Standard Oil Company. The scheme originated with the Pennsylvania Railroad, over which the Standard Oil Company was not a shipper, and with Pittsburg and Philadelphia refiners, who were its competitors. Some of its stockholders subscribed for a

minority of the stock of the South Improvement Company as a matter of self protection. They had nothing to do with framing the contracts between the South Improvement Company and the railroads. They were informed that equal rights would be accorded by the Company to the entire trade. They believed the plan impracticable. It was abortive; was never put in operation; affected the rights of no one and was finally and absolutely abandoned.

The promoters of the South Improvement Company were Thomas A. Scott, President of the Pennsylvania R. R., W. G. Warden of Philadelphia and Mr. Logan of Pittsburg. The charter was obtained from Mr. Scott and the plan was worked out by Mr. Scott, Mr. Warden and Mr. Logan for the general settlement of the difficulties in which the railroads were then involved (J. D. Rockefeller, vol. 16, pp. 3068-9). Two thousand shares of the stock of the Company were subscribed for, the majority being taken by Frew, Lockhart and Warden, who were members of the firm of Warden, Frew & Co., the Logans, the Warings and P. H. Watson. P. H. Watson was a railroad man, the others were Philadelphia and Pittsburg refiners (J. D. Rockefeller, vol. 16, pp. 3069, 3154-5). None of these gentlemen became stockholders of the Standard Oil Company until several years after the South Improvement plan had been finally abandoned (J. D. Rockefeller, vol. 16, pp. 3154-5). The Logans never became stockholders of the Standard Oil Company, but were afterwards associated in a competitive business with Mr. Emery, one of the chief witnesses for the Government (Emery, vol. 6, p. 2616). Two of the chief opponents of the South Improvement Company were the individual defendants, John D. Archbold and H. H. Rogers (J. D. Archbold, vol. 17, p. 3447; Rogers, vol. 6, pp. 3296-7). The Standard Oil Company at the time of the South Improvement affair was not shipping oil over the Pennsylvania Railroad and did not ship over that road until several years thereafter (Cassatt, vol. 20, pp. 21-2).

Mr. Rockefeller testifies in respect to the connection of Standard Oil stockholders with the South Improvement Company :

“Q. Now Mr. Rockefeller, the leading men in the Standard Oil Co. of Ohio at this time were yourself

and your brother, William, and Mr. H. M. Flagler, were they not? A. They were.

Q. Did you or your associates initiate that South Improvement scheme? A. We did not. We did not.

Q. Did you have anything to do with the acquiring of the charter that they got? A. We did not.

Q. Did you negotiate the contract with the railroads? A. We did not.

Q. The interests that you have mentioned, in Philadelphia and Pittsburg were fellow-refiners in the same business, were they not? A. They were refiners in the same business.

Q. Were they large Pennsylvania interests? A. They were the largest Pennsylvania interests, and allied with Mr. Scott in the freighting scheme, in competition with us.

Q. Did they come to see you about it? and confer with you about it? A. They did.

Q. What position did you take about it, from the beginning? A. We did not share their views as to the plan. We so frankly stated to them, and more than once.

Q. Did you have have faith or confidence in the practicability of such a plan? A. I shared the views which my associate, notably Mr. Flagler, had very pronouncedly, that it was not a scheme which we ourselves would care for.

Q. You took an interest in the matter? A. We took an interest.

Q. Now, why did you take that with the attitude that you had toward it? A. In order to come to something like a correct understanding as to how we would be influenced, it must be remembered that Mr. Thomas A. Scott, the then potent factor in the Pennsylvania road, was not to be disregarded by any means by railroads or by shippers. Mr. Scott, and I might say also, our friends whose names I have mentioned, were very enthusiastic about the bringing about of an adjustment of the divisions in railroad traffic, and that was a scheme that they were wedded to. We did not wish to break with these gentlemen. We especially did not wish to break with Mr. Scott. We assented, not having confidence, and most plainly stated these things, notably to Mr. Warden.

Q. Were you at any time, in the very beginning of it, a controlling interest in the matter? A. We were only a minority interest. Mr. Flagler, Mr. William Rockefeller, and I were subscribers; I do not remember the amount, but it was, I should surely say, a decided minority.

Q. Well, the Standard Oil interests were in the minority; you remember that? A. I should say so.

Q. Do you recall whether any stock was ever issued? A. I have no recollection about it. I do not have any idea that I ever saw a share of that stock. But I could not say positively.

Q. Well, the scheme, whatever it was, failed, Mr. Rockefeller? A. The scheme never went into operation. There was never any business done under the South Improvement Company. That was well understood at the time.

Q. Can you say from your recollection that the stock was never issued, and no money ever paid on it? A. I believe that it was never issued.

Q. And no money ever paid on it? A. And no money ever paid.

Q. Is that your best recollection? A. That would be my recollection.

Q. Now, if I understand you, that was the result that you expected, was it not? A. It was the result that Mr. Flagler and I, with my brother, expected. But we deemed it better not to break with the powerful Mr. Scott, and not to disregard the wishes of the large refining interests there who were so anxious to bring it about. * * * (J. D. Rockefeller, vol. 16, pp. 3069-3070).

“ Q. At this time had these Pennsylvania refiners whom you have mentioned, Warden, Frew & Co. and the others, any relations of interest with you whatsoever?

A. Oh, none whatever.

Q. I mean, with you or with the Standard Oil Co. of Ohio? A. None whatever. We were competitors.

Q. There was no relation of common interest between you in any business? A. Oh, none whatever. Our interests were entirely distinct, and we were competitors in the business in every sense of the word. * * * (Mr. Rockefeller, vol. 16, p. 3071).

The theory of the promoters of the enterprise, as they represented it to Mr. Rockefeller and his associates, was that it would not only solve the difficulties of the railroads in apportioning traffic and maintaining rates, but would benefit the entire trade, every producer, manufacturer and shipper being treated alike, and rate wars and rebates being done away with (J. D. Rockefeller, vol. 17, pp. 3145-6). The plan aroused great opposition; the charter of the company was repealed in March, 1872; no oil was ever hauled under its contracts with the railroads; no money was ever paid on the subscriptions to its

capital stock (J. D. Rockefeller, vol. 17, pp. 3070-71, 3141, 3143; Emery, vol. 6, pp. 2612-4, 2723). The raise of rates made by the railroads at the time of the South Improvement Company contract (Emery, vol. 6, p. 2722, Lombard, vol. 1, pp. 247-8) was, as far as appears, uniform to all shippers, including the Standard Oil Company. The increased rates charged by the New York Central were not paid by independent shippers (Lombard, vol. 1, p. 248). *It is proved that after the South Improvement plan was abandoned the New York Central treated all shippers alike* (Emery, vol. 6, p. 2639). The oil region refiners kept right on in business unaffected by the South Improvement Company plan (Emery, vol. 6, p. 2616). There is no evidence that any refiners elsewhere were in any way affected. *The plan had nothing to do with the acquisition by the Standard Oil Company of the Cleveland refineries* (J. D. Rockefeller, vol. 16, pp. 3065, 3147). The manifesto, purporting to set out the aims of the organizers of the South Improvement Company (Emery, vol. 6, pp. 2619-2624) is not shown by any evidence whatever to have been issued or signed by the Standard Oil Co. (of Ohio) or any of its stockholders (J. D. Rockefeller, vol. 16, pp. 3143-5).

2. *The Standard Oil Company was not a party to the Pooling Agreement of 1874 and had nothing to do with bringing about that agreement. The purpose of the agreement was the practical solution of railroad difficulties. The limitation of its benefits to pipe lines maintaining agreed rates of pipeage was necessary to the attainment of its primary object. The claim that it took away the rights of the oil region refiners and that this was done in order to benefit the Standard Oil Company, is wholly unwarranted.*

The agreement of 1874 between the various oil carrying railroads (annexed to the Bill as Ex. 6), provided for an apportionment of the oil traffic between the oil carrying roads in accordance with the amounts actually carried during the previous two years. It put Pittsburg and Cleveland and the oil regions, the three chief interior refining points, on an equality so far as concerns rates to the seaboard, and put all points, from which crude oil was shipped, on an equality in respect to such shipments. To equalize the interior refining points it provided that the shipper of refined oil from any such point

should be entitled to a drawback equivalent to the freight paid by him on the crude oil from which the refined oil was made; and it provided for a rebate of twenty-two cents a barrel on crude oil shipped to seaboard, which exactly offset the drawback on refined oil from interior points and put seaboard refining points on an equality with Cleveland, Pittsburg and the oil regions. The only limitation upon the payment of the prescribed drawbacks and rebates was that they were to be paid only on oil reaching the initial points of rail shipment from pipes, the owners of which maintained agreed rates of pipeage. Of the pipe line companies that put themselves in a position to obtain the benefits of the contract (Pet. Ex. 770, vol. 10, p. 1817) there were only two in which the Standard Oil interests were interested. They owned the stock of the American Transfer Company; they had a one-third interest in the firm operating under the name of the United Pipe Lines; they had no interest whatever in the Union Pipe Company, the Antwerp Pipe Company, the Oil City Pipe Company, the Grant Pipe Company, the Karns Pipe Company, the Relief Pipe Company, the Pennsylvania Transportation Company, or the Sandy & Milton Pipe Lines (J. D. Rockefeller, vol. 16, pp. 3223-4).

The object of the contract of 1874 between the oil carrying roads was obviously the adjustment of railroad problems. The refiners upon the different lines of road, upon whose prosperity the roads were dependent for transporting oil, were put on a parity. The provisions limiting the application of the drawbacks to the pipe lines observing agreed rates of pipeage, were necessary; otherwise the provisions contemplating a uniform charge for transportation from the wells to the seaboard would have been ineffective (J. D. Rockefeller, vol. 16, pp. 3100-1; 3148-50).

Mr. Rockefeller says (p. 3101) :

“The effect was to prevent the interference with carrying out the idea that each point would be placed on the same basis, the same opportunity offered the refiner at each point in the freighting of his oils, whether carried to Cleveland, for example, or to some other point and there refined and carried back.”

There is no evidence whatever to show that the Standard Oil Company had anything to do with the bringing about of

the contract between the oil carrying roads, but there is no reason why it should not have urged the roads to adopt the principle embodied in it. Many arguments may be urged to establish the fairness of the principle, and anyone who might be benefited by its adoption had a perfect right to advance these arguments.

The contract did not work to the advantage of the Standard Oil interests except to the same extent that it operated to the advantage of other refiners in Cleveland and Pittsburg. There were refiners in Cleveland not connected with the Standard Oil interests ; and in Cleveland and Pittsburg together the refiners not connected with the Standard Oil interests were probably more numerous and more important than those in the oil regions. There were also many important refiners at the seaboard who were in a position to obtain the benefits of the contract. The arrangement worked against the refiners located in the oil regions only in so far as it placed them upon an equality with the refiners at Pittsburg and Cleveland and the seaboard in respect to oil intended for export and thereby neutralized the advantages of their location.

Similar arrangements have always been a common feature of rate making. The same principle governs in the cases where milling in transit is permitted. Provisions permitting milling in transit are a common feature in the tariffs of all grain carrying roads.

The railroad contract of 1874, like all similar arrangements, was regarded as a great injustice by those whose interests were injuriously affected. Some refiners in the oil regions who, notwithstanding their inability to compete on equal terms with the large refineries at Cleveland, Pittsburg and on the seaboard, had managed to continue in business through their proximity to the oil fields, were unable to stand the stress of competition after the contract of 1874 went into effect. To this fact is to be attributed the animosity of Mr. Emery against the Standard Company, which he insists upon regarding as the author of the contract between the railroads. It is also the explanation of the closing down of the oil region refineries after 1874, to which he testifies. He asserts that the effect of the contract was to shut down every refinery on Oil Creek (Emery, vol. 16, p. 2636). His own refinery, the Octave, had a pipe line that delivered oil direct

to his refinery. Under the terms of the contract he, of course, was not entitled to a drawback on his oil shipments (vol. 6, p. 2727). He shut down immediately after the arrangement went into effect (Vol. 6, p. 2636). Mr. Emery's statements as to the havoc worked in the oil regions generally by the contract of 1874 are very greatly exaggerated, for example : Porter, Moreland & Co., at Titusville, continued in active business until their firm was purchased by the Standard Oil interests in 1875 (J. D. Archbold, vol. 17, p. 3228). The same was undoubtedly true of a number of other refiners in the oil regions (J. D. Archbold, vol. 17, p. 3241). Many of the small refineries had failed or gone out of business, or been absorbed by larger works, prior to the agreement of 1874 (Emery, vol. 6, p. 2627).

3. The arrangements respecting oil terminals were fully warranted by the circumstances. In making such arrangements with the Standard Oil Company the railroads only followed their previous practice. The Standard Oil Company neither sought to obtain nor did obtain any illegitimate advantage through these arrangements.

The contract of April 17, 1874, between the Standard Oil Company on the one side and the Erie R. R. Co. and the Atlantic & Great Western R. R. Co. on the other (Ex. 3 annexed to the Bill of Complaint) is the earliest of the terminal contracts. The Standard Oil Company agreed to ship by the railroads fifty per cent. of the products of its refineries destined for New York, at rates to be agreed upon by the President of the Atlantic & Great Western R. R. and the Standard Oil Company, satisfactory to the President of the Atlantic & Great Western R. R., and not higher than the rates paid by the competitors of the Standard Oil Co. from competing Western refineries to New York by all rail lines. The Standard Oil Co. assumed the risks of transportation and the obligation to load and unload cars, and to furnish its products for transportation with as great regularity as possible. The railroads agreed to furnish a sufficient number of good and suitable cars to transport the products of the refineries when loaded thereon, and to do all switching necessary to the prompt conduct of the business. The Erie Railway Co. leased to the Standard Oil Co. the Weehawken Oil Yards in Jersey City. The Standard Oil Co. agreed to pay as rental

for the yards five cents per barrel on all oil passing through the yards ; that it would conduct the oil yards as an oil warehouse, giving all patrons of the road using the yards fair and equal facilities for the oil business at uniform cost, and that the warehousing charges should be always as low as those of any other oil yard affording equal facilities for the transportation, storage and preparation for shipment of oil at the terminus of any railway, or other line competing with the Erie R. R., at or adjacent to the port of New York. The lease was renewed on similar terms in March, 1875 (Ex. 4, annexed to the Bill of Complaint).

The terminal contract between the New York Central & Hudson River R. R. and the Standard Oil Co. was made in July, 1875. The Standard Oil Co. agreed to provide at Hunter's Point, L. I., and at the foot of 65th Street on the North River, New York City, commodious warehouses, wharves and piers provided with tankage and all necessary appliances for the receipt, handling, cooperage, warehousing and delivery of crude oil and the products of petroleum, and to unload and handle at 65th Street and at Hunter's Point Yards respectively all crude oil and all refined oil consigned to those points. Provisions similar to those contained in the Erie contract assured to all shippers equal treatment and facilities. The railroad agreed that it would deliver all crude and refined oil at the 65th Street yards and Hunter's Point respectively "unless otherwise consigned ", and would pay to the Standard Oil Company for its service, under the contract ten per cent of the current rate of freight on the oil carried for the Standard Oil Company.

These are the contracts cited by the Government as showing that the Standard Oil Company aimed at acquiring a monopoly of the terminal facilities at New York Harbor with a view to subjecting rival shippers to excessive charges, and to espionage. The Bill alleges that by similar arrangements control was obtained of the terminal facilities of the Pennsylvania R. R. at Jersey City, and also of the terminal facilities at Philadelphia and Baltimore. There is no evidence of any such arrangement, either at Philadelphia or Baltimore. The stock of the National Storage Company, which owned an oil terminal at Jersey City that had been used by the Pennsylvania R. R. was acquired from the stockholders of

that Company in 1881, at the time of the organization of the National Transit Company (Def. Exs. 282, vol. 19, p. 678, and 328, vol. 19, p. 774).

The terminal facilities at 65th Street, in New York City, and at Hunter's Point, never belonged to the New York Central R. R. Co. nor had the Pennsylvania R. R. ever owned the National Storage Co. (J. D. Rockefeller, vol. 16, pp. 3133-5 ; Def. Ex. 282).

The Weehawken Docks to which the contract with the Erie Road relates appear to have been built by a private corporation and to have been acquired subsequently by the Erie Railroad (Bostwick, vol. 6, p. 3309). It does not appear that the docks were used as oil terminals prior to 1869. In that year J. A. Bostwick's firm leased them from the Erie and for three years managed the docks, handling and warehousing oil for shippers over the Erie (Bostwick, vol. 6, pp. 3309-11), collecting the freight as well as the terminal charges (Bostwick, vol. 6, p. 3311). Bostwick at this time was an independent shipper having no connection with the Standard Oil Company. For two years after the expiration of the Bostwick lease, the Erie tried managing the docks themselves and then leased them to the Standard. The yards at 65th St. and North River in New York City were originated by Lombard, Ayres & Co., who leased the ground from the Metropolitan Gas Company (Bostwick, vol. 6, p. 3314). Bostwick took over the lease and bought the fixtures (*id.*). The yards became the property of the Standard Oil Company (Def. Ex. 282, vol. 19, p. 678). The Hunter's Point Yards also belonged to the Standard Oil Company (J. D. Rockefeller, vol. 16, p. 3132).

Mr. Rockefeller testifies in reference to the terminal contracts as follows :

" Now, what was the occasion for those contracts ? A. We were handling these large quantities of oil. We were warehousemen. We were natural parties to take these warehouses and handle them. It was in our regular business of the receiving and shipping of the oil, and we had the oil which was constantly coming forward, that we wanted a place for. They wanted experienced warehousemen who could handle the warehouses in the best manner ; a simple, natural arrangement to be made between the railroad company and the men best calculated to conduct the business.

Q. Now, let me ask you, is oil that is transported in barrels on railroads subject to damage and injury, leakage, requiring special and particular attention when it reaches its terminus ? A. In those days especially, when the oil was so largely transported in the wooden packages such as I referred to, often of green wood, with exposures to sun and weather, it required the emptying of the barrel, the recoopering of the barrel, shortening up the hoops, and reglueing the package if necessary, and whatever rendered it acceptable to the purchaser of the oil, before he would consent to its being loaded into the ship. The regular services of warehousemen were performed by us in these cases.

Q. That was a special sort of a service, was it not ? A. A special sort of a service, for which we were eminently fitted.

Q. You were very large shippers ? A. We were, certainly.

Q. And your oil was coming there and needed attention when it got there ? A. Certainly.

Q. Was that sort of attention, the cooperage and handling of the oil there, within the ordinary work of railroad employees ? A. Not at all ; not at all.

Q. It required a special class of employees ? A. Oh, yes. It was not a warehouse business in the ordinary sense, where all classes of merchandise are held. It was this peculiar business which was our business, and the railroad companies we thought chose the proper parties to be their warehousemen.

Q. And that was the occasion of these contracts in regard to the oil terminals ? A. It was.

Q. To have the service that was required there of a special kind properly rendered ? A. That was a part of what we contracted to render.

Q. And which was necessary in the case of your own shipments ? A. Oh, yes." (J. D. Rockefeller, Vol. 16, pp. 3099-3100.)

The charge made by the Government that the oil terminals were leased with a view to imposing prohibitive terminal charges on other shippers is not supported by a scintilla of evidence. By the terms of the New York Central contract any shipper could, if he chose, consign his oil to delivery points other than the Standard terminals (See contract). As a matter of course, any shipper who chose to do his own warehousing, cooperage, etc. could take his oil on its arrival. Oil was delivered by the New York Central at its 30th St. Station

(Lombard, vol. 1, p. 249). The occupancy of the Erie Docks at Weehawken was for only a short period (J. D. Rockefeller, vol. 16, p. 3165). There is no evidence that the National Storage Company was at any time the sole oil terminal of the Pennsylvania Railroad or that it was used as a general oil terminal by that road after it passed into the hands of the Standard Oil Company. The contracts in terms required fair and equal terminal charges. Each required that the charges should be as low as the terminal charges on oil reaching New York by other lines of transportation. There is no evidence that the Standard Oil Company ever at one time had possession of more than two oil terminals. *The Erie Canal, as well as other railroads, afforded means for the transportation of oil* (Lombard, vol. 1, p. 249). There is no evidence that the terminal charges were not at all times just and fair or gave the Standard Oil Company any illegitimate advantage.

Mr. Lombard, a witness called on behalf of the Government, was a competitor of the Standard Oil Company during its occupancy of the oil terminals. He testifies :

“ Q. How long did they have control of these terminals ? A. I don’t know.

Q. Have them yet ? A. They may have them yet ; I don’t know.

Q. You don’t know about that. While they had control of these terminals for these railroads, all oil shipped over these railroads had to be handled by them, did it not, whether it was shipped by the Standard Oil Company or by other companies ? A. Yes, it all went through those yards.

Q. All went through the yards ? A. Except what came by canal.

Q. Yes. Of course what came by canal didn’t go through those yards ? A. And I think some refined oil was shipped over the New York Central road to 30th Street, which was not one of the regular terminals.

Q. Well now, what if any advantage would the possession of these terminals give the Standard Oil Company ? A. Nothing except a knowledge of the business and what money they could make out of it.

Q. What is that ? A. And what money they could make out of it.

Q. Well they could fix terminal charges, couldn’t they ? A. Yes, but there was a regular scale. * * * ” (Lombard, vol. 1, p. 249).

4. *The charge that illegitimate advantages over other shippers were obtained by the Standard Oil interests through rebates and rate concessions from railroads and that such rebates and concessions were obtained for the purpose and had the effect of putting competitors at a disadvantage and driving them out of business, is not sustained. Prior to 1875, and subsequent to 1880, the Standard Oil Company received no better rates than were generally accorded to other shippers. In the interval, the concessions in rates obtained were coupled with obligations that fully neutralized any advantage resulting therefrom, or were accorded equally to other shippers. Concessions were not obtained for the purpose of driving competitors out of business; and no competitors were driven out of business or crippled in their operations by reason of any concessions obtained.*

The principle that railroads should accord equal rates to all shippers and should strictly adhere to the rates stated in their published tariffs was not established until long subsequent to 1882. Each shipper got the best rate he could and railroads gave all sorts of special rates to secure traffic.

Mr. Archbold testifies as follows :

" Q. I am talking now about the period, say, from 1865 to 1875-6-7. How about the payment of rebates and drawbacks during those early years by railroads, not only in the petroleum business but in business generally ? A. My answer on the question generally would be that the carriage of freight was a question of bargain as between the shipper and the railroad. It was true of all that period, and of the period up to the date, if you please, of the passage of the interstate-commerce law. Any man knew that he could go to the railroad and bargain for the transportation of his goods, as he would go to a merchant and bargain for a bill of goods. It was a question of bargain.

* * * * *

Every man who had freight to transport knew that he could go to the different railroads and bargain among them for a price at which it should be transported.

Q. And prior to the time that Porter, Moreland & Company sold out to the Acme Oil Company was that your experience in the conduct of the business ? A. It was my experience. I arranged for the freight, bargained for the freight for Porter, Moreland & Company

and for a number of other concerns whom I represented in the shipment of their goods, just as closely as I knew how, through all those years; and I found, after knowing more about the business of the Standard Oil Company, that I had not done so badly in many cases.

Q. Now, prior to your connection with the Acme Oil Company, back in 1872, you spent some time here in New York representing six or eight different refining interests, did you not? A. I was here in New York practically from 1872 to 1875, or was most of the time here.

Q. Doing what? A. I was here as the sales agent for a number of oil-region refineries, my own concern among the number.

Q. And refineries and interest not in any way then connected with the Standard Oil interests? A. No, sir.

Q. During that time that you were representing these other interests you had to do with this freight question? A. I did. I made freight engagements for these different concerns.

Q. And made them in the way that you have just described? A. I did, and I knew that others were doing the same thing.

Q. Did you ever know what your next-door neighbor was getting in those days? A. I did not, except as I could find it out by the most careful possible inquiry, and then I tried to beat him. * * *

(Archbold, Vol. 17, pp. 3241-3242)

“ Q. Now, you testified, as I recall, that during the early days you were familiar with the rate situation in Pennsylvania, and Pennsylvania to the seaboard, did you? A. I did, and I was.

Q. For how many years? A. I had to do it especially up to 1881 and 1882. I had to do with it especially beyond that, I should say.

Q. I did not get your answer. A. Perhaps well into the eighties.

Q. And as I understood your testimony the question of rates was a question of personal contract between the shipper and the railroads? A. Up to the passage of the Interstate Commerce law that was certainly true.

“ Q. It then depended upon who could make the best contract, did it? A. It was obligatory on every shipper to make the best contract he could.

Q. That is, if he wanted to succeed? A. If he expected to succeed, and most everybody did.

* * * * *

(Archbold, Vol. 17, pp. 3446-3447)

* * * * *

"Q. You were getting big rebates at that time" (*i. e.* 1879) "for the Acme Company, weren't you? A. The question of contracting for freight in those days was one of bargain always. There was no such thing, as a matter of fact, as established tariffs. Every man who had any considerable freight to ship knew that he must go, and he did go, and shop between the different roads for the best rate that he could get, and there was no concealment or secret with reference to that matter. All shippers knew it. It was known to the general public, and it was not peculiar to the oil business. The oil business was in no different relation to that matter than other classes of traffic. * * *

(Archbold, Vol. 17, p. 3454).

* * * * *

"During the year 1878 did you not get from the Pennsylvania Railroad, before that contract was entered into, for the Acme Oil Company, a rebate of 63 cents out of \$1.29? A. I do not remember as to the date or what the contract for shipments at that period was. I got during the year 1877 from the Pennsylvania Railroad Company, if I shipped by them during that year, the very best terms possible for the shipment of my freight.

"Q. And were they not about half what the published rate was? A. I do not think there was any published rate.

Q. There was a known rate, wasn't there? A. If there was any such thing as a nominal rate everybody knew that it was purely nominal. There was no shipper of petroleum in those days who was so far behind in knowledge of the current business as to not understand that he must bargain for his freight. * * *

(Archbold, Vol. 17, p. 3455).

* * * * *

"Q. And it was very important to get in the industry as low a rate as possible? A. As a manufacturer it was so. It was certainly desirable.

"Q. And the big shippers usually got the lower rate, didn't they? A. I do not know at all as to that.

* * * * *

(Archbold, Vol. 17, p. 3462).

Mr. Irwin, called on behalf of the Government, testifies in respect to freight rates in the early 70's as follows:

"Q. In those early days, Mr. Irwin, was there a good deal of railroad rate-cutting, fierce strife among the

railroads to get all the business they could? A. I think there was. There was great rivalry between the New York Central system and the Pennsylvania. They were fussing all the time about something or other.

Q. I suppose, as a matter of fact, freight was bought and sold in those early days about like any other commodity, wasn't it? A. No, I don't think it was. I think there was a rate of freight.

Q. Well, that was not very closely adhered to, was it? A. No, it was not. There were drawbacks and drawbacks within drawbacks.

Q. And that was true of practically all the industries? A. Everybody got drawbacks in those days. It was in the air. The rate of freight on a barrel of refined oil I have known to be as high as \$2.05 a barrel from Pittsburg to Philadelphia, and the last I knew about it it was 45 cents.

Q. I suppose in the early days, when the rate was \$2.05, there were some drawbacks? A. I think there was.

Q. And every shipper fought for the best rate that he could get? A. That is what we are trying to do. * * * (Irwin, Vol. 6, pp. 3026-3027).

Mr. Emery, called as witness by the Government, says:

"Q. Was the Standard Oil Company the only industrial organization, that you know of, that accepted rebates prior to 1887? A. Oh, no. The question was raised previous to that time by other people."

Q. Were rebates paid by railroad companies to your knowledge, to other people? A. Only through what I have read, that is all.

Q. Well, didn't your concern itself, at one stage of its career, get rebates from the railway companies? A. I would say that in the very early history of the Octave Oil Company, when we were shut down, we went to the railroads and they said that they would give us 25 cents rebate.

Q. 25 cents? A. I think it was 25 cents a barrel.

Q. A rebate from what? A. Per barrel on oil.

Q. Do you mean from the published tariff? A. Yes. Now this is hearsay. That is what came up before the board of the company.

Q. Was it paid? A. It was reported to the directors by the manager of the company. I didn't know it personally.

Q. And you were one of the directors? A. Yes, sir.

Q. That is, the manager of your company reported to your board of directors, of which you were a member— A. Yes.

Q. That the railway company had offered to give you a rebate of 25 cents per barrel. A. I think it was, Mr. Rosenthal.

Q. And was the proposition accepted? A. I don't know whether it was or not. I rather think it was.

Q. Don't you know that it was? A. Well, I couldn't swear. * * *” (Emery, Vol. 6, pp. 2772-2773)

Even subsequent to 1882 the Pennsylvania Railroad paid rebates to refiners and shippers in no way connected with the Standard Oil Company subsequent to 1882 (Emery, vol. 6, p. 2774).

There is no evidence that prior to 1875, the Standard Oil Company got any better rates than were accorded to others. Mr. Lombard testifies that at least down to 1873 or 4 he got as good rates as the Standard Oil Company (vol. 1, p. 246). Mr. Emery testifies that in 1872 the New York Central Road promised to treat all shippers alike and faithfully kept its promise (Emery, vol. 6, p. 2639). In 1874 and 1875, the oil region refiners represented by Mr. Archbold were getting rebates and Emery's refinery was getting a rebate of 25 cents a barrel. There is no evidence that the Standard Oil Company was doing any better (Emery, vol. 6, p. 2773; J. D. Archbold, vol. 17, pp. 3241-2).

The contract dated January 29th, 1880, between the Standard Oil Companies and the Petroleum Producers' Union and the contract of April 27, 1880, between B. B. Campbell and the Pennsylvania Railroad (Bill of Complaint, Ex. 10) provide for an entire abolition of the system of rebates, discriminations and special concessions and all the evidence in the case is to the effect that all special concessions to the Standard Oil Companies ended with the execution of these contracts and that equal terms were accorded to all shippers (Bill of Complaint, p. 36; Emery, vol. 6, p. 2641).

The interval between 1875 and 1880 may be divided into three periods: (1) from some time in the earlier part of 1875 to the spring of 1877; (2) from the spring of 1877 until the fall of 1877; (3) from the fall of 1877 until the end of 1879 or the beginning of 1880.

During the first period the New York Central terminal contract (Ex. 5, annexed to the Bill) went into effect ; and the Standard Oil Company first began shipping extensively over the Pennsylvania Railroad. The New York Central contract provided for a concession of 10 per cent. on rates in consideration of the construction and management of the oil terminals at 65th Street and Hunter's Point. The only other testimony in the case from which concessions by the other road, during this period can be inferred is the testimony of Mr. Cassatt, given in the case of *Commonwealth vs. Pennsylvania R. R.* (vol. 20, pp. 1 *et seq.*). This testimony is not rightfully in the case, being inadmissible on any known theory of evidence. Mr. Cassatt says that in 1875, the Pennsylvania R. R. made its first contract with the Standard Oil Company (vol. 20, pp. 21-22). He gives as the reasons for making the contract :

“ * * * We found they were getting very strong and they had the backing of the other roads, and if we wanted to retain our full share of the business and get fair rates on it, it would be necessary to make arrangements to protect ourselves.”

He states that The Standard Oil Company, after the contract with the Pennsylvania Road, divided its traffic between the New York Central, the Erie and the Pennsylvania, and after 1876 gave a share of it to the Baltimore & Ohio also. There is no evidence (except Ex. 5) to show the terms of the arrangements between the Standard and the railroads, and no evidence that exclusive concessions were made to the Standard.

The second period was the period of the rate war growing out of the entry of the Empire Transportation Company into the refining business. It lasted only a few months. The Standard Oil Company withdrew its shipments from the Pennsylvania Railroad and shipped exclusively by the other lines. Rates were cut until they were very low (J. D. Rockefeller, vol. 16, pp. 3087-8). There is no evidence that the cuts made by the other roads in favor of the Standard were not made equally in favor of their other shippers (Cassatt, vol. 20, p. 27). The independent refiners who shipped over the Pennsylvania Railroad during this period enjoyed rates that were probably

as low as any that the Standard got and sustained no injury from the contest (Cassatt, vol. 20, p. 13). The rate war between roads was not begun or carried on with a view to enabling the Standard Oil Company to acquire the refineries and pipe lines of the Empire Transportation Company (J. D. Rockefeller, vol. 16, p. 3089). As far as the pipe lines were concerned, it was a very reluctant purchaser (Cassatt, vol. 20, pp. 35-6). Mr. Cassatt gives a very clear account of the causes that brought about the rate war :

“ By MR. MACVEAGH :

Q. What, in your judgment, was the occasion of the notice from the Standard to your company in the spring of 1877 that it would cease to ship oil over your lines ?
 A. They stated their reason, not perhaps in the formal notice, but in many interviews between us, to be that they objected to the Empire Transportation Company, which was the organization having charge of the oil traffic of the Pennsylvania Railroad and its connecting lines, being in the oil refining business as a competitor of theirs. They claimed that in many ways this gave the Empire Transportation Company the advantage, if they chose to take the benefit of it, and believed that they did take advantage of them in the distribution of cars and in many ways.

Q. At that time were any of your competitors for the business of the Standard Oil Company engaged or likely to engage in the refining business as a competitor of the Standard ? A. No sir ; they were not. On the contrary, they protested strongly against our having any direct or indirect interest in or control over the refining business. They claimed that the fact that the Empire Transportation Company controlled a refining business gave us indirectly a control of the refining interest, and that gave us an advantage over them that they would not submit to.

Q. In other words, was or was not the complaint that you were annexing to the business of transportation, by the indirect mode of using the Empire Transportation Co. as a refiner, the business of a manufacturer also ? A. They claimed that.

Q. And were thus at the same time assuming an unfair relation to the other transporting companies and to the Standard as a refining company ? A. That was their statement.

Q. Was or was not the effort to compel you to adopt that view the real cause of the struggle in the oil traffic in the summer of 1877 ? A. It was.” (Cassatt, vol. 20, pp. 23-4). * * *

" * * * In the spring of 1877 they (the Empire Transportation Company) were building this refinery here in Philadelphia; they were enlarging the refinery in New York. As to whether they had any arrangements with the refiners in Pittsburg or were making leases there, I do not know. My impression is that they did have some arrangement of that kind, but I cannot speak of my own knowledge." (Cassatt, vol. 20, p. 35).

The third period began in October, 1877, with the settlement of the Empire Transportation Company rate war and continued until the abolition of the system of rebates and concessions at the beginning of 1880. It lasted altogether about two years. The nature of the arrangement prevailing during this period is indicated in Exhibit 7, annexed to the Bill of Complaint. The Standard Oil Company agreed with the Pennsylvania Railroad to so regulate its shipments that its total oil traffic to each of the seaboard cities should be the proportion of the total oil traffic to which, according to the understanding between the trunk line roads, it was entitled. The Standard guaranteed to the Pennsylvania not less than 2,000,000 barrels a year and was to make good any loss of profits due to a failure to carry out its guarantee; it agreed, as far as practicable, to ship crude oil and refine it in Philadelphia; and otherwise promote the interests of the Pennsylvania Road. The rates were to be fixed by the trunk lines, but should be so fixed as to put the Standard on a parity at all times with shippers using competing lines. The Pennsylvania was to pay the Standard a commission of not less than 10 per cent of the freight on its oil shipments and was not to pay a like commission to any other shipper unless such shipper guaranteed an equal amount of traffic. This arrangement imposed obligations on the Standard Oil Company that fully offset any advantage over other shippers to be derived from it. Mr. Rockefeller testifies:

"Q. Now, will you tell us the reasons for that contract, and what service you rendered under it as long as it lasted? A. We rendered ample service for it. We did for them what they could not do for themselves.

Q. What was that? A. We did it to our own disadvantage at times, oftentimes; sent our shipments to

such ports and at such times as to preserve the regularity of the shipments, which was a thing much desired by the railroad companies, to the end that they should get the amounts which they had among themselves agreed upon, to be shipped to each of the ports from which we were exporting the oil.

Q. Do I understand you by that that at a particular time—for instance, to preserve the proportion of the Pennsylvania Railroad—you would ship oil to your disadvantage to Philadelphia, when under normal conditions of your business you would have shipped that oil, say, to New York? A. I do say that. We made the shipments to conform to their agreements as to divisions, and that was done from time to time in quantities to enable them to carry out the divisions of the traffic and secure for themselves fair transportation rates.

Q. Were you interested in the particular divisions of proportions between the railroads themselves? A. It was not our affair. It was their affair; they desired it. It was a service which we rendered to them.

Q. In evening the shipments? A. In evening the shipments.

Q. And what about your business enabled you to perform that function; was it the volume of your business? A. The volume of our business from the different points that were then engaged in refining—at Philadelphia, at Oil City, at Pittsburg, at Cleveland; and we made the shipments as they required them.

Q. Whether that was to your advantage or not? A. Whether that was to our advantage or not. That was a part of what we covenanted to do.

Q. Now will you tell us in regard to the guaranty that you gave in this contract? You gave a guaranty of a minimum, did you not? and you had to pay on the basis of that minimum in any event? A. We did; yes. What they desired was large and regular shipments. These we could furnish them, and we could carry out the contract of guaranty of the quantity which they should surely get. That we took upon ourselves, and it was a matter of great value to them" (J. D. Rockefeller, vol. 16, p. 3090-1). * * *

"Q. So that this was practically a payment to you of a drawback of 10 per cent. on your shipments because you were large shippers, was it not? A. It was nothing more or less than what was represented in the practice of those times in regard to oil and all other freights. The man who could contribute a large regular volume of traffic, was able to secure some consideration on that account, especially if he coupled with it

other considerations of value in reference to the permanency of that freight.

Q. And you sought by this agreement to make sure that you got those considerations ? A. We sought by this agreement to do just what every shipper was doing and had been doing and has been doing since, to make a freight arrangement that was what we ought to have under the circumstances.

Q. Under this guaranty did you pay any freight on oil that you did not ship ? A. I have no recollection on that subject.

Q. Did you ship any oil to any place where you did not use the oil or need it in your business, in order to equalize the freight ? A. We shipped oil to ports to which we would have preferred not to ship it, in order to comply with the requirements of this contract" (J. D. Rockefeller cross-examination, Vol. 16, pp. 3117-8).

Mr. Archbold says, in respect to the operation and duration of the arrangement :

"Q. Do you know of any other shipper who furnished or could furnish as much as the Standard Oil to the Pennsylvania Railroad ? A. I could not answer that question without investigation. There were other large shippers at that time. And I want to say with reference to this contract that the compensation, as I recall it, of 10 per cent. which was operative for a period —and I don't think a very long period—was not considered at all an unreasonable compensation for the evening process involved in that contract at that time.

Q. That was a pool contract for— A. I would like to complete my answer.

Q. Go ahead ; yes. A. Such evening arrangements with large shippers of all kinds of large traffic prevailed universally on the part of the railroads in those days. There was nothing to be criticised in them. They were not subject to criticism. They were well understood. There was no secrecy about it. It was all as open and aboveboard as any feature of business of those days of thirty years ago.

Q. Isn't it a fact that that contract was secret at that time ? A. I have no recollection of there ever being any secrecy about it. My own general impression (and I make this as a statement from recollection) is that the contract was operative only for a comparatively short period." (J. D. Archbold, vol. 17, p. 3450).

Mr. Lombard's testimony shows that there was no sort of secrecy about the contract of 1877 (Lombard, vol. 1, p. 252). The commission paid under the arrangement, according to Mr. Cassatt's testimony in *Commonwealth v. Penn'a R. R.*, was *ten per cent.* During a short time, very considerable additional concessions from the freight were given but these were given in pursuance of the agreement that the rates to the Standard should be as low as the rates to shippers using competitive routes. The competitive route was by way of Buffalo and the Erie Canal (Cassatt, vol. 20, p. 37; Lombard, vol. 1, pp. 257-8). The rate was much lower than the Standard had been paying (Cassatt, vol. 20, p. 30). It was not more than seventy cents a barrel (Emery, vol. 6, p. 2550; Lombard, vol. 1, p. 258). The New York Central and the Erie first made reductions to meet the rate and the Pennsylvania and Baltimore & Ohio followed their lead (*id.*). The reduced rates were in force until December, 1878, when the Erie Canal was closed by ice. The regular rates were then restored (Cassatt, vol. 20, p. 31). The benefit of the reduction was allowed by the Pennsylvania and presumably by the other roads to all shippers not using the competitive route (Cassatt, vol. 20, pp. 18, 20).

The concessions in freight rates received by the Standard had nothing to do with the failure of other refiners; or the acquisition by the Standard of existing properties. The Cleveland refineries were purchased years before the Standard ever got a concession. By 1873 before the Standard ever shipped a barrel of oil over the Pennsylvania R. R., all of the chief shippers over the Pennsylvania, except Warden, Frew & Co., had failed (Cassatt, vol. 20, p. 21). The oil region refiners, who survived the pipe line agreement of 1874, seem to have been pretty successful solicitors of rebates themselves, and there is no indication that any of them were coerced by rebate arrangements into selling to the Standard. Mr. Lombard, of New York, and Mr. Irwin, of Pittsburgh, showed themselves amply able to take care of their interests (Lombard, vol. 1, pp. 258-9; Irwin, vol. 6, pp. 3018-9), getting their oil to seaboard by competitive routes at rates lower than the Standard had been paying.

Irwin and Lombard are the only witnesses called on behalf of the Government to show the actual operation of railroad rates upon independents during the period from 1875 to 1879.

Irwin's refinery was located in Pittsburg. He does not suggest that he suffered because of any rebates or discriminations given to the Standard. He found the rates by the Pennsylvania high and worked out a scheme for shipping by water to Huntington and thence by the Chesapeake & Ohio to seaboard. In 1877 he was shipping over the Baltimore & Ohio because he could get a better rate than over the Pennsylvania (Irwin, vol. 6, pp. 3018). Lombard does not testify to any difficulty about rates until after the agreement of 1877 between the Standard and the Pennsylvania. Even then for some time he got the same rates as the Standard, having a contract with the Empire Transportation Company which the Pennsylvania assumed and carried out until its expiration (Lombard, vol. 1, p. 265). He was then told frankly by the Pennsylvania officials that he could not have the same rate as the Standard, because they were the only people who could make peace between the railroads (*id.*). He was told at the same time, however, that the difference in rate would be so slight that he could scarcely feel it (*id.*) and that in the distribution of cars and facilities the refiners not connected with the Standard Oil Company would be placed on a strict equality with the Standard (Cassatt, vol. 20, pp. 37-8). This was undoubtedly the fact. The difference between his rate and the Standard's was never more than 10 per cent. He does not suggest that it was sufficient to appreciably affect the profits of his business. His complaint against the Pennsylvania and the other roads was that he had difficulty in obtaining cars (Lombard, vol. 1, p. 265). This is a constant source of complaint of shippers everywhere. He and his associates diverted their shipments to the route via the Erie Canal and afterwards allied themselves with the Tidewater Pipe Line.

It is a striking fact that of all the many oil refiners who retired from business prior to 1882, not one, except Mr. Lewis Emery, has come forward to say that he was driven out of business through rate concessions obtained by the Standard Oil Company ; and Emery attributes the failure of his refinery to the pool agreement of 1874 (Emery, vol. 6, pp. 2636-9), with which the Standard had nothing to do.

It may be stated generally that there is no evidence anywhere in the case to connect the failure or retirement from business of a single refiner with any advantages in rates accorded the Standard.

5. The allowance made to the American Transfer Company was a temporary arrangement having no relation to the ownership of the latter company by the Standard Oil Company. It was in the nature of a pro-rate paid by one carrier to another carrier, which was in a position to send forward its traffic by any one of several competing lines and claimed special consideration because of its exertions to enlarge the volume of traffic. The object of the American Transfer Company was its own profit. Whether or not the arrangement would now be considered justifiable, it is no evidence whatever of a disposition to injure the business of others for the sake of the incidental benefits that might result therefrom.

The arrangement respecting the allowance by the Pennsylvania Railroad Company to the American Transfer Company is set out in the letters annexed to the Bill as Exhibit 8. The evidence as to the settlements made under it (Justice, vol. 3, pp. 1493-6; testimony of O'Day in *Ladenburg v. Penn'a R.R.*, vol. 6, pp. 3286-3293; testimony of Cassatt, vol. 20, pp. 1 *et seq.*) is all clearly incompetent.

The terms of the letters show that the arrangement was made in view of the immediate conditions and that it was of a temporary nature. Mr. Jefferson Justice of the Pennsylvania Railroad, called as a witness on behalf of the Government, testifies that it was in force a very short time (Justice, vol. 3, p. 1497). It was made several months after the settlement of the Empire Transportation rate war and had nothing to do with the negotiations which brought that war to an end (Cassatt, vol. 20, pp. 7, 8, 19, 39).

The Standard Oil Companies, at the time of the consummation of the negotiations that ended the rate war, did not contemplate any such arrangement as that made by the American Transfer Company with the Pennsylvania. The position taken by them in those negotiations shows that they wished the Pennsylvania Railroad to own and operate its own pipe line feeders. The obligation of providing pipe line service for the whole oil field was one that they had no desire to assume. Mr. Cassatt testifies (vol. 20, pp. 35-6):

"Q. Do you remember at the time of the negotiations between the Empire Transportation Company and the Standard Oil Company and the Pennsylvania Railroad Company, the position which the Standard took as

to the advisability of the Pennsylvania Railroad Company purchasing the Union Pipe Line? Do you remember whether they urged and insisted that the Pennsylvania Railroad Company should purchase the Pipe Line, rather than that they should do it? A. Yes sir; as I said in my direct testimony, I think the Standard Oil Company did not wish to buy the Union Pipe Line; they wanted the Pennsylvania Railroad Company to buy it; it was necessary, it was explained that it should be bought in order to close out our contract with the Empire Transportation Company; the question then came up, who should buy it; we insisted that the Standard Company should buy it and they urged us to do it.

Q. What was the extent of that line, have you any idea? Several hundred miles? A. Three or four hundred miles.

Q. You can state whether they made that purchase of their own accord, and from their own wish to do it, or whether against their own wish, and upon the insistence of the Pennsylvania Railroad Company, that they should do it as part of the arrangement. A. We insisted that they should do it; that we could not.

Q. And it was against their desire as first expressed? A. They much preferred we should buy it."

The tremendous increase in the production of crude oil which began in 1877 continued through 1878 and 1879 (Def. Ex. 265) and taxed to the uttermost the abilities of the pipe lines to take care of the output. The Pennsylvania Railroad, having parted with its own pipe line feeders, repeatedly called on the pipe line companies to construct lines which would increase its volume of traffic (O'Day, vol. 6, pp. 3292-3). Mr. O'Day was the manager of the pipe lines and at this time was calling upon the Standard Oil for millions of dollars to be expended for pipe lines and tankage (J. D. Rockefeller, vol. 16, p. 3095). It was very natural that Mr. O'Day, pressed for money as he was, should ask the railroads, which were reaping great profits from his expenditures, to share those profits to some extent with the pipe lines which originated the traffic and delivered it to the railroads. The American Transfer Co. and The United Pipe Lines were operated as one system (O'Day, vol. 6, p. 3293); they had the power to send forward their traffic by any one of several railroads or by other routes (Cassatt, vol.

20, p. 39). The railroads, therefore, were not likely to disregard Mr. O'Day's demand for some sort of pro-rating arrangement on traffic. The basis of Mr. O'Day's demand on Mr. Cassatt and the reasons for Mr. Cassatt's compliance alike are to be found in the immediate relations of the railroad and the pipe lines as connecting carriers and had no reference whatever to the ownership of the pipe lines by the Standard Oil Company.

The point about the arrangement, which has made it the subject of invidious criticism, is that Mr. O'Day, the manager of the American Transfer Company, asked for and was promised an allowance of twenty cents a barrel not only on the oil delivered by his pipe lines to the Pennsylvania Road, but on all crude oil carried by the railroad. The suggestion made as to this feature of the arrangement is that its tendency and purpose was to keep up the rate charged to outside shippers and to prevent outside pipe lines from making equally advantageous pro-rating agreements. The testimony of Mr. O'Day demonstrates that no such ulterior purpose entered into his calculations.

He had no idea beyond getting for the pipe lines the biggest share he could of the transportation profits on oil. It was all the same to him whether he got a bigger allowance on the pipe line shipments or an equivalent allowance on all shipments (O'Day, Vol. 6, pp. 3290-3293).

The tendency of the arrangement to keep up railroad transportation rates to outside shippers and to put other pipe lines at a disadvantage is of no consequence in the present case, for two reasons:

(a) Such tendency manifestly did not enter into the motives inducing the arrangement, and therefore has no bearing on the general question of the intent of the parties to it.

(b) The tendency was so slight as to be negligible. The arrangement was merely temporary, subject to modification without notice and would undoubtedly have been immediately modified, if any other pipe line had appeared in the field and asked like concessions, or had the arrangement proved an obstacle to a reduction of rates otherwise obtainable on oil not originating with the American Transfer Co. or its associated pipe lines. There is no evidence that during the continuance of the arrangement any crude oil was carried by the Penn-

sylvania Railroad that did not come originally through the pipes of the American Transfer Co. or those of the United Pipe Lines. Nothing of the sort is proved either by the testimony of Mr. Justice, Mr. O'Day, or Mr. Cassatt. The allowance may have been paid on oil that was not shipped by the Standard Oil Co. (Justice, Vol. 3, p. 1496). It does not follow at all that it had not come through some of the pipe lines. In fact, there is no proof in the case that it could have reached the railroad in any other way.

Mr. Archbold testifies as to the whole matter as follows :

"Q. Yes. And didn't it provide for such payment, and wasn't such payment made, not only on the oil shipped by the American Transfer Company, but all other shippers? A. I do not know. Whatever the terms of the contract provided in that respect—

Q. Were carried out? A. Were no doubt carried out. But I want to say that the contract in itself was a very reasonable contract to the Pennsylvania road. The American Transfer Company, at a large expense, provided gathering lines throughout the oil sections to bring the oil to the Pennsylvania road, and that and other considerations entering into the matter at that time and the volume of business furnished them made this an exceedingly reasonable compensation to pay the American Transfer Company for the bringing as a feeder, as a collateral, to the Pennsylvania system.

Q. And it appears that the American Transfer Company, in addition to receiving this 20 cents, charged 20 cents gathering charge, besides." * * *

Q. Isn't that correct? A. I do not recall.

Q. Always charged 20 cents gathering charge didn't it? A. There was a long period (and I imagine it extended all through those years) when, if there was a charge of 20 cents, it was purely nominal, for they bought the oil in the field and they had competition there for it, and in carrying it to the railroad, I imagine, that not only that nominal charge, if there was such, but a part of the compensation itself was often sacrificed.

Q. Why should the Pennsylvania Railroad pay the American Transfer Company 20 cents per barrel on the oil shipped by other people? A. Well, they brought the oil to them.

Q. No, sir. A. They brought the oil to them.

MR. ROSENTHAL. Yes, sir.

Q. They got the 20 cents not only on oil brought to them by the American Transfer Company, but all oil

shipped by the Pennsylvania Railroad? A. Well, I think they brought the oil to them.

Q. No such testimony. Do you know they did? A. Well, I couldn't say positively, but I am strongly of the opinion that they did. I do not know how else they would get it.

Q. Weren't there any other pipe lines besides the American Transfer? A. Well, there were some, but whether they reached these points or not that were stipulated in this contract I don't know.

Q. The same arrangements were made, he says, with all the other railroads, in this letter. Is that true? A. I do not recall the contracts with the other railroads."

(Vol. 17, pp. 3451-3452).

SECOND. A general policy or disposition to facilitate the extension of the Standard Oil business by getting rid of competitors cannot be inferred from the number of acquisitions made by the Standard Oil interests or the dispositions made of properties purchased. The purchases and the disposition of the properties purchased were in all cases based on legitimate business considerations. The sellers were not restrained from re-entering business and the refining capacity of the Standard Oil Companies was continually increased.

(a) The acquisition of properties and the disposition made of refineries acquired were incidental to the expansion and coordination of the Standard Oil business.

The Government has proved that many refineries have been purchased by the Standard Oil interests and that in a number of cases these refineries were not continued in operation as independent units. For the most part, no evidence whatever has been offered on the part of the Government as to the circumstances of the acquisitions, or the character or trade of the refineries purchased, or as to when or why their operation was discontinued. The Court is asked to import an intent to monopolize

into the transactions and to accept the transactions as proof of such intent (Lombard, vol. 1, pp. 245-6; Emery, vol. 6, pp. 2625-2634; J. D. Archbold, vol. 17, pp. 3323, 3332, 3336, 3337, 3340). The defendants have given an adequate explanation of the acquisitions and of the disposition made of them. The chief refineries purchased have been operated ever since and have grown into the great plants of to-day: *e. g.*, the Long Island Refining Co., Chas. Pratt & Co., the Kings County Works of Sone & Fleming, Bayonne Works, Atlantic and Philadelphia Works at Philadelphia, and many others. Some were continued in operation for many years as separate refineries and were finally abandoned or removed to meet changed conditions in the trade; *e. g.*, the Imperial Refinery at Oil City, the Central Refining Co. of Pittsburg (Def. Ex. 282, vol. 19, p. 673). Those at Titusville were destroyed by fire (J. D. Archbold, vol. 17, p. 3260). Some were connected by pipe lines with existing works and were continued in operation as part of a general plant; *e. g.*, the various works at Cleveland (J. D. Rockefeller, vol. 16, p. 3161). Others were moved bodily and consolidated with existing plants; *e. g.*, the works at Galatea, Ohio (J. D. Archbold, vol. 17, p. 3337); the Bush & Denslow Works (Def. Ex. 282, vol. 19, p. 673). In a number of cases small refineries formed part of the assets of firms or corporations whose chief business was that of marketers. Where these firms were bought out, the refineries were eventually discontinued; *e. g.*, Scofield, Schurmer & Teagle (Teagle, vol. 3, p. 1467), Chess-Carley & Co. (J. D. Rockefeller, vol. 16, p. 3077), the Portland Kerosene Oil Co., the Maverick Oil Co. and the Beacon Oil Co. (J. D. Archbold, vol. 17, pp. 3357, 3364). In many cases small refineries, of little or no value as refineries, had a trade and good-will that made it worth while to buy them. The equipment of such refineries was utilized as far as practicable in connection with other works, but naturally the refineries as separate plants were abandoned (Archbold, vol. 17, p. 3336).

All the refineries purchased by the Standard Oil interests fall within one or other of these classes. Mr. Archbold testifies (vol. 17, p. 3324) that competitive refineries were bought only where the purchase could be made on a fair basis, and where it seemed to promise an extension of business with a favorable outlook. He testifies on cross-examination:

" Q. Now, these refineries that I named at the seaboard that you bought, how long did you operate them? A. Probably the most of them but a very short period, for they were very inconsiderable affairs.

Q. Dismantled them, didn't you? A. We consolidated them with the larger works.

Q. What do you mean by consolidated. You tore them down, didn't you, and used the material? A. We utilized that part of the construction which was worth saving and added it to the larger works, consolidating, concentrating, and economizing. That was the theory of the business.

Q. You mean you dismantled them, tore them down, didn't you?

MR. ROSENTHAL. He means just what he says.

Q. Did you do that? A. I mean just what I say.

Q. Did you dismantle them? A. I mean that we took the parts of them that were available for use and consolidated them with the larger works, as a matter of economy.

Q. What did you do with the rest of the material? A. The rest of the material that was not fit for use we disposed of, I suppose, in the best way possible.

Q. Isn't that what you would call dismantling a refinery? A. Hardly dismantling; it is consolidating.

Q. Tearing down and putting some of the material into another? A. I should think that the bringing together into a large and thoroughly well equipped works the small and inconsiderable plants of those days was essentially a consolidation.

Q. And you consider an economical way to construct a refinery is to buy up a lot of little refineries and use the old material to make new ones? A. Our purpose in buying the little refineries was to succeed to their volume of business" (vol. 17, p. 3324).

* * * * *

" Q. Well, now, did you buy and dismantle 50 refineries? A. We may have bought 50 refineries, and we may have dismantled them in the sense that I have now described of consolidation and utilization.

Q. Do you think it is economical in the construction of a refinery to buy of a lot of old refineries and use the second-hand material? A. The prime purpose in the purchase of the small refinery was to succeed to its volume of business.

Q. Get it out of the way? A. Such utilization as could be made of the property itself and of the people engaged in its management we were glad to utilize in those days.

Q. You got them out of the way in that way, didn't you ? A. We brought them into cooperation with us in the development of the business, on a better basis as to construction and location " (vol. 17, p. 3336).

The Globe refinery, which is the most important acquisition of refining property made by the Standard interests since 1882 and probably the most important of those which the Government claims to have been dismantled, had among its assets 1,152 tank cars (Reighard, vol. 6, p. 3136). The evidence indicates that every part of the equipment and apparatus was added by the Standard interests to the equipment of their existing refineries (Reighard, vol. 6, p. 3137 ; J. D. Archbold, vol. 17, pp. 3331-2).

The Government has shown the purchase of a number of small marketing companies and businesses in various parts of the country. In reference to these purchases Mr. Archbold testifies :

" The inauguration of bulk stations, the transportation in bulk cars, and the distribution that came about in bulk wagons, tank wagons, of course worked a radical change in all respects in the doing of the business, and it tended irresistibly toward the elimination of the jobber or small dealer in oil in the various sections of the country. They realized that the change was occurring and that their facilities were rapidly becoming valueless because of the introduction of these better methods, and for that reason they, in numberless cases, desired to treat for such properties as they had, whether teams, platform, wagons, or whatever, and through that period that was the reason of the many trades that were made with different small dealers throughout the country. It was largely—I should say in the great majority of instances—their own wish that they be dealt with in that way ; for the march of progress in the business showed perfectly clearly that their facilities were becoming old fashioned and obsolete " (vol. 17, pp. 3467-8). " * * * not only were we establishing these bulk stations, but our competitors in the manufacturing business were also establishing them, and the small dealer knew that his old method was doomed, in the face of the progress that was being made in the business " (vol. 17, p. 3469).

(b) *The Standard Oil Co. has not sought by contract or otherwise to restrain those whose properties it has bought from re-entering the business.*

The essential element in any plan to monopolize a business through the purchase of the plants of competitors is to exact from the sellers contracts restraining them from re-entering the business. In the absence of such contracts, they could immediately devote their experience, skill and the money received to creating new properties and building up new businesses, and the object of the purchaser would be defeated. The Standard Oil interests have bought up many properties. If their object was monopoly, they might be intrenched behind a great network of contracts restraining many of those whose skill and experience would make them the most formidable and the most probable competitors from ever engaging in the oil business. Without proof that such contracts were regularly and uniformly exacted, the number of acquisitions made by the Standard Oil interests would indicate only that in the development of their business they had occasion to make many purchases. In the absence of such contracts, the purchase of properties could not restrain interstate or foreign commerce.

The Government has not shown that a contract not to re-enter business was exacted from the sellers in the case of a single refinery or pipe line property purchased by the Standard Oil interests. In the entire record there are only two cases in which any attempt has been made to furnish such proof. These are both long subsequent to the trust agreement of 1882. Irwin sold his refinery in Pittsburg in 1885. He testifies :

“ Q. Was there any arrangement in reference to your going into business again when you made that sale ?

MR. ROSENTHAL. Was that in writing, Mr. Irwin ?

WITNESS : What is that ?

MR. ROSENTHAL : Your contract of sale ?

WITNESS : Yes, sir.

MR. ROSENTHAL : Well, I object to it then, upon the ground that this is not the best evidence.

Q. Now, you can answer the question. A. Well, I think it was understood that we were not to go back into the business again. There was no writing—no agreement in writing.

Q. Well, you say you think it was understood? A. Yes, sir.

Q. If it was not in writing, in what way was there an understanding? A. Well, I don't just remember, but possibly there was some conversation about that—that we were not to go into the business; some suggestion of that kind." (vol. 6, p. 3014).

The other instance is that of the Argand Refinery at Marietta, Ohio. The testimony of W. J. Cram given in the case of *Monnett vs. The Buckeye Pipe Line Co.*, was read into the record notwithstanding the objection of the defendants. Mr. Cram testified in that case as follows:

"Q. Did you agree to stay out of the business of refining oil, too? A. As a company; no, sir.

Q. Did you as individuals? A. I did.

Q. You were in New York negotiating this lease at 26 Broadway; did all the others agree to that, was that a general agreement? A. Not all of them.

Q. Who in your company did not agree to keep out of the oil business? A. All of them, I believe; Mr. Dale agreed to keep out.

Q. Did Mr. Chamberlin? A. No, sir; he is in the oil business.

Q. Is he limited to the kind of oil business he can remain in? A. I can not tell you; I suppose he does as he pleases.

Q. You were there when the contract was made? A. I told you Mr. Dale and myself agreed to keep out.

Q. Was that as individuals or company that you made the lease? A. As a company.

Q. And the contract as to keeping out of the oil business was as individuals? A. That was simply a verbal agreement. I had given up my work on account of my health and it was immaterial to me. Mr. Dale has not been actively in the oil business since 1885.

Q. How many of your directors of your company actually participated in the sale in New York at different times? A. Three." (vol. 5, pp. 2424-2425.)

Emery, Castle and Reighard have testified as witnesses on behalf of the Government. Emery is the Government's chief witness. He sold the Octave Refinery to the Standard Oil interests in 1876 (Emery, vol. 6, p. 2628). In 1879 he built a refinery at Philadelphia (Emery, vol. 6, pp. 2641-2642) and

did an active business until 1887 when he sold out again (Emery, vol. 6, pp. 2642-2643). In 1889, he started another refinery at Bradford, which is still in active operation (*id.* pp. 2651, 2661). Emery has testified at great length and with great animosity against the Standard Oil Co., but there is no word from him to indicate that he ever agreed or was ever asked to agree to keep out of the oil business. Reighard sold his Pittsburg refinery to the Standard Oil interests in 1885, and within two years started the Globe refinery at Pittsburg (vol. 6, pp. 3133-3134). Castle sold his refinery at Cleveland to the Standard Oil interests and now owns the Columbia Refining Co. There is no suggestion that either violated any understanding or agreement in re-entering business.

(c) *The Standard Oil interests have not sought to keep down the refining capacity of the country or the volume of oil to be marketed.*

The Standard Oil interests have added many barrels capacity to their refineries for every barrel of capacity of the refineries which they have bought and ceased to operate. After every purchase they have put on the market more oil than their refineries and the refineries purchased had put before. (Def. Ex. 268, vol. 19, opp. p. 627; Def. Ex. 269, vol. 19, p. 627). Their course has been consistent with their avowed object in purchasing competing refineries, *i. e.*, the expansion of their refining capacity and their trade. It has been entirely inconsistent with an intent to monopolize.

An intent, directly opposite to that of a monopoly, is demonstrated by the rise in the price of crude oil in the Lima field. Owing to the refractory character of the crude, the Standard companies were the only purchasers. For other purposes the value of the oil is only 15 cents a barrel, which was the price it was selling at when the Standard began its purchases. Under the influence of the Standard's purchases, the price has risen to over a dollar a barrel (Burton, vol. 16, pp. 2639-40). The same tendency to keep up and increase its output and the total volume of trade, even if thereby its profits are cut down by the increase in the price of the raw material, appears in its operations in the Mid-continent field.

THIRD. There is no proof of a policy or disposition on the part of the Standard Oil interests to restrict by contract the volume of trade or the operations of its competitors.

Such a policy pursued over a long series of years would almost necessarily involve a great many contracts with competitors imposing restrictions on the amount such competitors might produce, confining them to special markets or localities, limiting their growth, denying to them any share in the total increase of the volume of trade. If it had been the general policy or disposition of the Standard Oil interests to seek to facilitate the expansion of the business by putting restrictions on competitors, we would find a multitude of such contracts. If there were only a few such contracts the presumption against the existence of such a policy would be strong; for the conduct of a great business over a period of many years would necessarily involve many troublesome controversies and special exigencies; and unless the contracts restricting competition were sufficiently numerous, uniform and unequivocal to indicate a systematic plan, the natural presumption would be that each was the result of special circumstances and conditions. The fact is that in the whole history of the Standard Oil Company, there are scarcely any contracts which, under the most severe interpretation of the law against restraints of trade, could be considered open to criticism. Such as there are, in every case, are fully accounted for by the special conditions out of which they arose. None of them are connected in any manner with the bringing together or holding together by the Standard Oil interests of the properties acquired, and there is not the slightest evidence that any of them was secured by any sort of oppression or coercion. All of them, except the contract of December 1872 were made subsequent to the trust agreement of 1882, after all the constituent factors of the business had been acquired.

(a) The contract of December, 1872 (annexed to the Bill and marked Ex. 1), between the Petroleum Refiners' Association and the Petroleum Producers' Association, throws no

light on the disposition of the Standard Oil interests and has no bearing on the case. The two associations included nearly all the producers and refiners in the country (J. D. Rockefeller, vol. 16, p. 3074). The Producers' Association grew out of the dissatisfaction of the producers with price conditions. This naturally led to an association of the refiners, and the agreement of December, 1872, was an endeavor to adjust the disturbed relations between the two interests on mutually satisfactory terms (J. D. Rockefeller, vol. 16, pp. 3072-5). The movement proved wholly impracticable and was very shortlived.

(b) The remaining transactions which would naturally fall under this head are considered at a later portion of this brief (*post*, pp. 225-9), in order to preserve, so far as possible, the order of the petition. They are :

- (1) Producers' Movement of 1887.
- (2) Purchases by Continental Oil Co. from United Oil Co. and Florence Refining Co.
- (3) California contracts with Puente Oil Co., Union Oil Co. and Pacific Coast Oil Co.

(c) These contracts with the Tidewater contracts and the arrangement evidenced by the memorandum annexed to the Bill as Exhibit 15 are the only contracts or transactions of a contractual nature which the Government has seen fit to call in question.

FOURTH. It is not shown that the Standard Oil companies have ever driven a competitive refiner out of business or purchased his refinery through any sort of compulsion.

It is a very striking fact that of all of those who have, within the last forty years, sold refineries to the Standard Oil companies, only two have come forward to say that their sales to the Standard Oil companies were anything else than fair and open business transactions. These two are Emery and

Castle. Emery twice sold out to the Standard Oil companies, once in 1876 and again in 1887. The property sold on the first occasion was the Octave refinery in the oil regions. The Octave had been shut down in 1874, and Emery attributes its failure to the Pool Agreement of that year. The Standard Oil companies had nothing to do with the Pool Agreement of 1874, and that agreement in itself was perfectly fair and reasonable (*ante*, p. 119). Except in so far as Emery claims that the sale was due to the Pool Agreement, he does not question the fairness or reasonableness of the transaction. The refinery sold by Emery to the Standard in 1887 was the refinery of Logan, Emery & Weaver, at Philadelphia. Emery asserts that his refinery had to be shut down and was sold because of lack of oil, due to difficulties in obtaining transportation by the railroads and consequent want of crude oil (Emery, vol. 6, pp. 2642-3). If the sale was due to the cause alleged by Mr. Emery, it is not shown that the conditions of which he complains were in any way attributable to the Standard Oil Companies. It is far from clear that the sale was due to any such cause. Mr. Emery, or his firm, had been asked to join the shut-in movement of 1887 (Emery, vol. 6, pp. 2646-7). He refused to do so unless he was guaranteed sufficient oil to run his refinery. Emery, Logan & Weaver had had a contract with the National Transit Company to supply them with oil, which they had themselves abrogated. Emery's negotiations were with the Producers' Union. He was a producer, and they sought to get him to join their movement. He says (vol. 6, p. 2768) :

“ I declined to join the shut-down movement and close in my oil unless they would agree to furnish me oil for my refinery.”

Through the committee of the Producers Union an offer to buy Emery's refinery was finally made by the Standard Oil Company. The price paid was apparently about the fair value of the refinery (Emery, vol. 6, pp. 2768-9).

Castle (vol. 6, pp. 3028-9) says that he sold his little refinery to the Standard Oil Company because he could not

get cars. In no other respect is the fairness of the sale questioned, and the Standard Oil Company is in no way connected with his failure to obtain cars.

It may be stated here in general terms, without qualification that in the entire case there is no evidence that the Standard Oil companies have ever driven a single refiner out of business, or purchased a single refinery, by any improper or unfair practices of any kind or description whatsoever.

FIFTH. The relations between the Standard Oil Companies and the Tidewater Companies did not begin until nearly two years after the Trust Agreement of 1882. So far as such relations, if continued, might now be open to criticism, they were finally terminated just after the passage of the Sherman Act. The contracts between the Tidewater Companies and the Standard do not indicate that the Standard sought to exclude others from the petroleum industry, or to restrict the volume of trade, or to deprive the public of the benefit of competition. After the cancellation of those contracts in 1890, they had no further significance. The present relations between the Companies are not open to criticism.

The Tidewater Pipe Line Company (Ltd.) constructed one of the earliest trunk lines towards the seaboard. The Company was organized in 1878 (Warren, vol. 1, p. 189), and shortly afterwards came into relations with Lombard, Ayres & Co., and other refiners in New York not connected with the Standard (Lombard, vol. 1, pp. 258-9). In 1879, it absorbed the Equitable Pipe Line (Emery, vol. 6, p. 2649) which had been used by various New York refiners (Lombard, vol. 1, p. 258 ; Pet. Ex. 257, vol. 7, p. 456).

There is some testimony in the case as to obstacles put in the way of the building of the line, but the Standard Oil Company is in no way whatever connected with the efforts to ob-

struct its completion to seaboard (Warren, vol. 1, pp. 189 *et seq.*). In May 1879 the line reached Williamsport, whence its oil was forwarded to the seaboard via the Reading Railroad (Warren, vol. 1, p. 194). At the seaboard it supplied the Ocean Oil Company, the Chester Oil Company, and Lombard, Ayres & Company. There is some evidence that in the summer of 1882 negotiations took place looking to a purchase of the entire Tidewater interest by the Standard Oil Trust, but these negotiations never got beyond a tentative stage (Lombard, vol. 1, p. 250; J. D. Rockefeller, vol. 16, pp. 3196-7).

The record has been cumbered with testimony relating to a controversy between stockholders of the Tidewater Company in January, 1883, over the control of the company (Benson, vol. 1, pp. 195-208; Pet. Ex. 23-6, vol. 7, pp. 89-105). There is no evidence connecting the Standard Oil Company with this controversy other than the fact that a year later some of the unsuccessful parties to the controversy sold their stock to the Standard (J. D. Archbold, vol. 17, p. 3320; J. D. Rockefeller, vol. 16, p. 3196; Benson, vol. 1, pp. 207-208; Pet. Ex. 257, vol. 7, p. 456). This stock, a small minority of the total stock of the Company, was bought by the Standard Oil Company in December, 1883, in connection with the purchase of producing properties (Pet. Ex. 257, vol. 7, p. 456; J. D. Archbold, vol. 17, p. 3320). The interest of the Standard Oil Company in the Tidewater Company has never amounted to more than 31 per cent. of the whole; and this has been held solely as an investment (J. D. Archbold, vol. 17, p. 3326). Until 1893 the Standard Oil interests did not even have a representative on the board of the Tidewater Company (Benson, vol. 1, 226).

Nearly three months before the Standard Oil Trustees became the owners of any stock in the Tidewater Pipe Line, contracts substantially identical with those annexed to the Bill as Exhibit 13 were entered into between the Standard Oil Company and the Tidewater Companies (Benson, vol. 1, pp. 211-2, 215). The contracts were duly terminated in 1890 as of January 1st of that year (Pet. Ex. 29, vol. 7, p. 108; Pet. Ex. 27, vol. 7, p. 106; Benson, vol. 1, p. 216). The contract between the National Transit Company and the Tidewater Pipe Company, Ltd., was expressly cancelled, and the contract between the refining companies thereupon by its terms came to an end.

If the contracts of 1883 tended to restrict the development and expansion of the Tidewater Companies, the restriction was finally removed in 1890. If those contracts evidenced a purpose to restrict such development and expansion, the purpose was then abandoned. They in fact did not tend to restrict the Tidewater, and a purpose to restrict the Tidewater cannot be spelled out from them. They did not effect the ability of any outside party to engage in the petroleum trade. If they had any tendency to deprive the public of the benefits of free competition, such tendency was of a very remote and indirect character. Such a tendency was not contemplated by the parties or embraced in the purposes of the contracts; and they can have no relevancy upon the question of the general purposes and policy of the parties interested in the Standard Oil business. The contracts did not put any limitation upon the prices to be paid or the prices to be charged by either party. They might freely compete either in the prices paid for crude oil, the prices at which they should sell their products and their charges for transportation. Neither was restricted in respect to markets or localities. If either had advantages which enabled it to transport or refine oil cheaper than the other, it retained the benefits of those advantages or shared them with its customers.

The total volume of business to be done by both was not limited or restricted in any way. The only restriction imposed upon the expansion of the business of either party was that in case such party expanded its business faster than the other, so as to do more than its proportion of the total business, the other should receive certain payments out of the profits on the excess business. This restriction, however, was offset by a corresponding stimulus to expansion. Unless the party entitled to payments out of the excess business of the other kept up its own business to at least eighty per cent. of its proportion of the whole, it lost all interest in the excess business of the other. The natural tendency of the contract was to induce the simultaneous expansion of the business of each. The manifest reason of the contract was that each party feared that it might be outstripped by the energy and enterprise of the other and its purpose was to give each a chance to develop and expand its own business simultaneously with the other.

It is almost inconceivable that these contracts could ever have constituted an obstacle to either party's dealings with anyone with whom in the absence of the contracts it might have been willing to deal.

The provision authorizing the Tidewater to cancel the agreement unless its average profits amounted to \$500,000 a year or the deficiency was made good by the Standard was obviously put in at the Tidewater's instance and for its protection. The contracts had very little if any practical effect. The Tidewater Companies apparently always earned more than \$500,000 a year; they must have fallen below 80 per cent. of their proportion of the business within a very short time after the contract was made (Benson, vol. 1, p. 217). The stimulus of the contracts was not sufficient to induce them to keep anywhere near the Standard in the race of development and expansion.

Since the termination of the Agreements of 1883, the only contracts between the Standard Oil Companies and the Tidewater Companies have been agreements under which the National Transit Co. undertakes to sell and deliver to the Tidewater not less than 2000 or more than 3000 barrels of oil a day, as the Tidewater shall demand, at the current market price plus 20 cents a barrel gathering charge (Pet. Ex. 28, vol. 7, p. 107). This contract was made in 1890, has been renewed two or three times, and is still in force (Benson, vol. 1, pp. 216-17). The Tidewater Pipe Co. itself gathers all the oil that it can reach with its gathering lines, (Benson, vol. 1, p. 217) and with the oil it gathers itself and the oil purchased from the Standard is enabled to run its trunk pipe line and its refineries to their full capacity (Benson, vol. 1, p. 218). The gathering system of the Tidewater Co. is in Allegany County, New York, and McKean County, Pennsylvania, and its trunk line extends to seaboard. (*id.*) The fields tapped by its lines have long been failing (*id.*) and it has not seen fit to make the great additional investments that would be necessary to enable it to reach new fields. It takes from the National Transit the full amount permitted by its contract. (Benson, vol. 1, p. 220).

The Tidewater Oil Co. sells 95 per cent. of its oil for export. Of the 95 per cent. sold for export trade 77 per cent. is sold on consignment through the Standard Oil Co. and

shipped in bulk. The remainder is sold for export to whoever will buy it, and goes chiefly to South America. Most of the illuminating oil sold for domestic use is sold on consignment to the Standard. Some of the Tidewater's illuminating and most of its lubricating oil is sold by the Tidewater direct to the trade (Benson, vol. 1, pp. 219-220). Mr. Robert D. Benson, Secretary of the Tidewater Pipe Co., Ltd., and Vice-President of the Tidewater Oil Co., called as a witness on behalf of the Government, gives a full and satisfactory explanation of the Tidewater's arrangement with the Standard :

" Q. With respect to the sale of your export oil to the Standard Oil Company, will you tell us first the difference between export oil and domestic oil, in its characteristics ? A. About fifty per cent. of the crude oil is a refined oil which the laws of the various states will not allow to be sold in this country. It is too low in fire-test to meet the laws of the states. Therefore, it has to be exported.

Q. What is the average fire-test in this country in most of the states ? A. 150 degrees fire-test, Water White.

Q. That is Water White oil that is 150 test ? A. Yes.

Q. What is the average European test ? A. About 100 flash, about 110 test.

Q. Which is, of course, a much lower grade of oil ? A. Yes ; it is also an inferior burning oil to Water White 150.

Q. Now, as I understand it, then, practically all of the oil that is exported is this inferior grade of oil ? A. All except what is sent to South American countries and some special markets where there has been a market worked up for the high-class oil.

Q. And with respect to that inferior grade of oil, there isn't any domestic market for it, is there ? A. There isn't any domestic market; it cannot be sold in this country.

Q. Now, of course, what I mean by the inferior grade of oil is the low test oil. A. Yes, sir.

Q. You understand that, don't you ? A. Yes, sir, I understand.

Q. I understood you to say that about fifty percent of the crude is necessarily a low-test oil. A. That varies in the various crudes, but I am speaking of our crude.

Q. That is Pennsylvania crude ? A. The Pennsylvania crude which we get to refine.

Q. And you get, perhaps, a larger percentage of the high-grade oil from Pennsylvania than from any other oil produced in this country, do you not? A. Yes, sir, more Water White, as I understand it.

Q. So that the amount of oil extracted, the crude oil, purchased in the other fields is, in the main, oil that is used for export purposes, is it not? A. Well, there would be a larger percentage, I think, than there would be from Pennsylvania.

Q. Now, when you say the Standard fixes the export price, do you mean anything more than that the Standard makes you a bid for such oil as your refinery produces that has to be sold for exportation? A. We send our oil to them on consignment, and they account for the sales. They make a market to their brokers, as I understand it, which other people selling outside of them do not follow; there is no reason why they should.

Q. So that your export oil, in the main, is consigned to the Standard? A. Yes sir.

Q. And not sold to the Standard. And whatever profit they may deliver from the sale of your exportation is by way of commission as consignee? A. We pay them a regular commission for it and get the returns as it is sold.

Q. Why do you sell your export oil to the Standard Oil Company? A. Why, the reason is that all of the bulk oil that is exported (and this low-grade oil goes in bulk shipments) is carried in oil ships and handled on the other side in tank-cars and tank-wagons in bulk, which means an enormous outlay of capital, and we didn't feel we could afford to go into that outlay of capital, provided we could make an arrangement which was fairly satisfactory to us with somebody else to handle it for us.

Q. So that the smaller refiner of oil, by reason, necessarily, of his lack of capital, cannot successfully get into foreign markets? A. They can't into the bulk market where the low-grade oil goes.

Q. Do you know anything about who created that foreign market? A. Why, not personally. I have always understood that it was largely done by the Standard Oil Company.

Q. Well, the other side will not object to your giving some hearsay testimony, I apprehend. A. Well, sir, I have heard—

Q. Is it not a fact—it is not a part of the history of the oil business, that the foreign business, in so far as this country is concerned, of bulk business, was estab-

lished, developed and built up by the Standard Oil Company ? A. I think so.

Q. Now, your refineries manufacture many other products besides the refined oil, do they not ? A. Yes, sir.

Q. And you sell those products yourself ? A. Yes sir, in part. Some of it we sell through the Standard, but generally speaking we sell most of it ourselves.

Q. You make your own prices ? A. Well, there is a market price, as we understand it, that we can sell below, or get above, if we can, but that is not feasible.

Q. Well, you sell the products of your factories exactly as other manufacturing interests sell the products of their factories, do you not ? A. Just the same.

Q. At the very highest price you are able to get ; is not that true ? A. Yes sir.

Q. Do I understand that you yesterday testified that 95 per cent. of your product is sold abroad. A. Yes sir.

Q. Why is that ? A. I have just testified why 50 per cent. of it is sold. We can not market it in this country. Now, that brings it down to the Water White oil, which is sold in this market almost exclusively, and we sell that abroad because, located as we are here in New York, and having facilities for putting oil up in cans and cases, we can get a better price for it than the home trade market would net us.

Q. Then, the reason you sell that other 45 percent abroad is because you get a better price there than you get here ? A. Yes. That is hardly a fair percent. 45 percent refers to all our other products. I refer only to burning oil. The reason we sell refined oil or burning oil, abroad is, that we get a better price.

Q. Generally speaking, you sell 95 percent of your product abroad because it is more profitable for you to sell it abroad than here ? A. We sell 50 percent of the refined oil abroad because we have to. We sell the balance of the refined oil as far as we can, because it pays better than the home trade market. We only sell in the home trade market what we can't sell abroad.

MR. MILBURN : When you say you sell 50 percent abroad because you have to, you mean that is the only market ?

WITNESS : That is the only market for that grade of oil.

MR. MILBURN : For that test.

WITNESS : For that test that we are obliged to make.' (Vol. 1, pp. 228-230).

SIXTH. The agreements of 1884 between the National Transit Co. and the Pennsylvania Railroad Co. (Exhibit 14 annexed to the Bill) were in all respects reasonable and proper contracts. They ceased to be operative in 1893. No ulterior purpose can be spelled out from them, and they are utterly irrelevant as evidence against the defendants.

The contracts were suspended as of January 1, 1893 (Justice, vol. 3, pp. 1499-1500). They have never since been operative (J. D. Archbold, vol 17, p. 3442). They were formally cancelled in 1905 (*id.*). These contracts were made at or about the time of the completion to seaboard of the National Transit trunk line through Pennsylvania. The Pennsylvania Railroad reached most of the principal points in the oil fields and undoubtedly had a valuable traffic in crude oil delivered directly to it by the gathering lines. It had also a valuable traffic in refined oil from interior points. It had great reason to fear that the completion of the trunk line to seaboard would not only take away its crude oil traffic but by transferring the refining industry to seaboard would cut heavily into its refined oil traffic. It was in a position by instituting a contest for traffic to demoralize the petroleum industry. It could not permanently reduce rates below a point where they would be perfectly satisfactory to the Transit Co. or wrest from the Transit Co. any substantial part of its business. It could, however, by altering the long established relation between freight on crude oil and freight on refined oil very seriously affect the conditions in view of which investments had been made and to which business had adapted itself.

For rate making purposes a barrel of refined oil had long been everywhere treated as equivalent to 1.3 barrels of crude.

The railroad could not affect this relation by lowering the rate on refined oil relative to crude, with a view to encouraging interior refineries. Such a cut would be met by a cut on crude rates by the pipe line, and the railroad would be compelled to lower its crude rate to protect seaboard refiners not supplied by the pipe line. It could, however, lower the crude rate without a corresponding reduction in its rate on refined.

Such a course would put the interior refineries at a disadvantage in the export trade and would probably put many of them out of business. The Standard Oil Co. as the greatest of the interior refiners shipping oil for the export trade was in common with the other interior refiners interested in the situation. It had great refineries in the interior, some of which, notably those at Pittsburg, were largely dependent upon the Pennsylvania Railroad. It was not ready at once to abandon its interior refineries and transfer its entire export business to the seaboard. It might never wish to do so. The situation was one that naturally led to an understanding between the parties.

The Pennsylvania was ready to agree not to disturb existing conditions, if the operation of the pipe line left it a substantial part of the oil traffic, it being immaterial whether such traffic was in crude oil or refined. The Standard Oil companies might readily, for a time at least, defer the transfer to seaboard of their interior refineries making oil for the export trade. The National Transit Co., with the co-operation of the Standard Oil companies, was in a position to give the Pennsylvania the assurances it required without incurring any onerous obligation.

In the contracts of 1884 the National Transit Co. agreed that the local pipe lines should not discriminate in favor of the trunk line; but that all shippers desiring oil delivered directly to the Pennsylvania through the local lines should enjoy the use of the local lines without favor or discrimination; and it guaranteed that the Pennsylvania's total volume of business in oil, *refined and crude*, should be at least 26 per cent.

In other words, it undertook that neither by the diversion of crude oil from local shipping points nor by the transfer of the refining business to seaboard would the Pennsylvania's total volume of traffic be cut below 26 per cent. The Pennsylvania Road on its part agreed to observe the established relation between freight on crude oil and freight on refined oil; *i. e.*, to treat one barrel of refined as equivalent to 1.3 barrels of crude. The terms of the guaranty were a secondary matter. The National Transit Co. undertook to deliver to the Pennsylvania at Milton on the Susquehanna River, enough crude oil to make up any deficiency below the Pennsylvania's agreed percentage,

the railroad receiving therefor one-half of the current through rate from Colegrove, Pa. (the beginning of the trunk line) to seaboard. By the supplemental contract it was agreed that the Transit Co. in lieu of actually delivering the oil should, whenever the through rate from Olean to seaboard amounted to thirty cents or more, carry it through to seaboard, accounting to the Railroad for the difference between one-half the rate from Colegrove to seaboard, and one-fifth of the rate from Olean to seaboard, on the oil so transported.

The contracts were for five years and were thereafter terminable at the option of either party.

It does not appear that any crude oil ever had to be delivered or any payments made to the Pennsylvania under this contract.

The Government insists that these contracts had an ulterior purpose, to wit: to make it to the interest of the Pennsylvania Railroad not to lower its rates to seaboard. The contracts in terms put no restrictions on the Pennsylvania's right to lower its rates. They put no restriction on the volume of traffic the Pennsylvania could carry. If it could by reducing its rates get more than 26 per cent. of the traffic, there was nothing in the contracts to prevent its doing so. The contracts were not to any appreciable extent an inducement to the Pennsylvania to maintain rates. If the total volume of seaboard traffic could be increased by a reduction of rate, the Pennsylvania's proportion would be correspondingly increased. If it could get more than its agreed proportion at profitable rates by making reductions, it was equally to its interest to make such reductions whether the contracts were or were not in force. The contracts did not, in fact, induce a maintenance of rates. Since the pipe lines reached the seaboard, the rate has been forty-five cents a barrel, or very much lower than the lowest rates ever obtained by the most favored shippers prior to the construction of the pipe line. The contracts of 1884 were manifestly not designed to put competitors of the Standard at a disadvantage; but on the contrary were for the benefit of the entire trade, and in all respects fair and reasonable.

CHAPTER IV.

PIPE LINES.

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Pipe Lines.

THE CHARGE THAT THE STANDARD OIL COMPANIES MONOPOLIZED THE PETROLEUM CARRYING BUSINESS BY PIPE LINES, AND THROUGH THEIR CONTROL OF THE PIPE LINES HAVE BECOME THE SOLE PURCHASERS OF CRUDE OIL IN THE DISTRICTS REACHED BY SUCH PIPE LINES, AND HAVE MONOPOLIZED THE PURCHASE OF CRUDE OIL, IS ENTIRELY UNSUPPORTED BY THE RECORD.

FIRST: Legal status of pipe lines owned by various defendant companies.

I. Certain of these pipe lines were built entirely on private rights of way without taking advantages of any statutory power of condemnation and by companies not organized under pipe line laws. It is the position of the defendants that such pipe lines are not and never were common carriers.

1. PRAIRIE OIL & GAS COMPANY.

This company is a private corporation organized under the laws of the State of Kansas. It has no right of eminent domain. It has none of the extraordinary rights or powers of corporations engaged in the public service. It was organized solely for the transaction of its own business and has strictly confined itself thereto. It has never carried any oil for the public, nor has it ever held itself out to the public as a common carrier. It has built entirely on private rights of way acquired by private purchase. It is not a common carrier by the law of the state of its incorporation, nor by the law of any other state in which it does business.

The pipe lines owned by the Prairie Oil & Gas Company are those extending from the Mid-Continent field eastward to Griffith, Indiana.

2. OHIO OIL COMPANY.

Substantially the same explanation is to be made as to this company. It is a private corporation, having no right of eminent domain ; organized for the transaction of its own business ; it has never held itself out to the public as a com-

mon carrier, nor is it a common carrier by the law of the state of its incorporation or by the law of any other state in which it does business. Indeed, so far as the transportation of oil is concerned, this company is specifically limited by its charter to oil produced or owned by it.

3. STANDARD OIL COMPANY (NEW JERSEY).

The pipe lines from Unionville and Centerbridge across the State of New Jersey to Bayonne and neighboring points and the pipe line from Fawn Grove, which crosses the State of Maryland to Baltimore, were all built on private rights of way bought by the companies constructing such pipe lines (Payne, vol. 1, p. 367). These lines have never been operated as common carrier lines. There are in fact in Maryland and New Jersey no statutes under which pipe line companies can be organized so as to acquire the right of eminent domain. These lines across the State of New Jersey and Maryland were sold to the Standard Oil Co. (New Jersey) in November, 1905, (Payne, vol. 1, pp. 366, 370), and are used solely for the transportation of oil belonging to the Standard Oil Company (New Jersey), which receives the same at the State lines of New York and Pennsylvania, the points of delivery being Unionville, Centerbridge and Fawn Grove.

4. STANDARD OIL CO. (CALIFORNIA.)

The pipe lines in California transport oil originating in California to points of destination within the State. They were built by the Standard Oil Company (California) and are used only for transporting the oil of that Company. They are not common carriers and are not engaged in interstate commerce.

II. All of the pipe lines owned by any of the defendants, other than the three companies above mentioned, are situated in the States of Pennsylvania, New York, Ohio, Indiana, Kentucky and West Virginia, and were constructed and have always been owned and operated by companies organized under general laws in some one of the said States, with the exception of the National Transit Company, which has a special charter. None of the charters of such companies are in any respect exclusive in character. Though it is not conceded that such companies are common carriers in interstate commerce, yet they have all duly filed or concurred in tariffs under the Hepburn Act of 1906.

SECOND : Pipe lines must be considered under two heads, viz :

I. GATHERING LINES ; AND

II. TRUNK LINES.

The gathering lines are a network of pipes spreading over the oil regions, reaching the wells of the various producers and providing means of transportation from the wells to railroad points, or to points on the trunk lines. The trunk lines are main lines of pipe extending sometimes for great distances. They provide a substitute for transportation by rail but are not in themselves indispensable to the conduct of the oil business. Gathering lines alone are essential to enable the producer to market his output.

Gathering lines not owned by Standard Oil interests are to be found almost everywhere in the oil fields ; and there is nothing to prevent these lines from extending a branch to the well of any purchaser who prefers to deal with them. Each of the larger oil fields, except only the Lima and Indiana field and the newly discovered field in Illinois, is connected with the seaboard by trunk lines not controlled by the Standard Oil interests.

Mr. Calvin N. Payne describes the general arrangement of the pipe line system as follows :

Q. The pipe lines of the country have been made and built for the purpose of transporting crude oil from the oil fields to refineries ? A. Yes sir.

Q. Will you describe briefly such a pipe line, and of what it consists ? A. A pipe line consists of branch connections to producers' tanks.

Q. Those you call gathering lines ? A. Those are gathering lines. Those lines are like a cobweb, they come in all directions, crossing one another, perhaps, but they come to a central locality within that field, that particular district, although there might be several central localities if the producing district was very large. The oil is gauged in the producer's tank. The first measurement is taken in the tank, and the bottom measurement, the last measurement, and the oil is run out.

Q. I don't care so much about that, Mr. Payne, as I do for the physical system. A. From these central points

in the field (there may be one or more in the field) the oil is then conveyed—

Q. In the central field are there storage tanks where the oil is collected from the gathering lines ? A. Well, there might be, and there is in some fields, and in others there is only a small amount of tankage. It would depend upon the size of the field. If it is a very large field, the storage tanks are built in large numbers, a regular system of them ; it depends upon the size of the field. The oil is conveyed from these several central locations to one of these tank farms, or tank cities, I might call it, to the larger collection of tanks. Those are principally located on the trunk lines ; those large amounts of tankage are located on the trunk lines, principally. Then the oil is taken from those fields, as demand is made for it, through the trunk pipe lines, to the destination where the shipper orders it taken, where he wants it delivered.

I. GATHERING LINES AND THEIR OPERATION AND RELATION TO PURCHASES OF CRUDE OIL.

1. Gathering lines common carriers.

The gathering lines owned by the companies which have filed their tariffs with the Interstate Commerce Commission, or have concurred in said tariffs, have at all times acted as common carriers. This is evidenced by the contract between the Pennsylvania Road and the National Transit Co. (Ex. 14 annexed to the Bill). The National Transit Co. in that contract undertook that its local division would deliver into cars furnished by the railroad company, at any of its regular delivery points and under its regular delivery rules, whatever petroleum the owners thereof desired to have so delivered, and would make no discrimination, either in its local charges for carriage, storage and other services, or in the use of any of its local facilities, but would at all times treat it in all respects as favorably as it treated other petroleum that was delivered to its trunk line division or to any other through carriers.

The method of operation of the local gathering lines is explained by Mr. Calvin N. Payne (vol. 1, pp. 379-80).

Q. A man produces oil, say, in the Pennsylvania oil field. A. Yes sir.

Q. And when he delivers it into your tank, he can get a certificate ? A. When he has credit on the books

of the pipe line for sufficient oil to cover the amount to which they issue certificates—the amount for which they issue certificates. Whenever he has a credit to that amount and wishes a certificate, that certificate is issued to him.

Q. Having a credit means that he has delivered into your gathering system that oil? A. Yes sir.

Q. And it has been received and registered by you? A. Yes.

Q. And then you issue a certificate for the amount for which he has credit, if he wants it? A. Yes sir.

Q. And the oil is then in your possession? A. Yes sir.

Q. And that he can sell and have delivered at any point within the district? A. Yes sir, any delivery point within the district.

Q. Any delivery point within the district? A. Yes sir.

Q. And so if he sells that, then the purchaser can call upon you for delivery at any one of those points?

A. Yes sir.

Q. You have the oil in your system and you deliver it at the points specified? A. Yes sir.

The independent refiners at every point reached by the gathering lines of the Standard Oil Companies have the same access to the oil fields through those lines that are enjoyed by the Standard Oil refiners. (Payne, vol. 1, pp. 368-369.) A very large proportion of independent refiners get their oil through the gathering system of the Standard lines. (*id.*, p. 369.)

The reason why gathering lines can be successfully operated as common carriers is because they carry always the same kind of crude and for comparatively short distances.

2. Crude oil purchases.

The Standard Oil Companies in dealing with the producer stand on the same footing with anyone else who desires to deal with the producer. The purchases of oil for use by the Standard Oil Companies are made by the Standard Oil Co. (New Jersey) through the Joseph Seep purchasing agency. The only advantage enjoyed by the Joseph Seep purchasing agency over any other purchaser is that his agents are known to the producers, have excellent credit and are always to be found wherever a producer desires to dispose of his oil. The working of the Joseph Seep purchasing agency is described by Mr. Archbold as follows:

Q. Through what source do the Standard Oil interests purchase their crude oil? A. The Standard Oil Company of New Jersey purchases its supplies of crude oil principally, or indeed substantially, through Joseph Seep and his agencies.

Q. And that is known as the Seep Agency, is it? A. Yes, sir.

Q. Can you tell us the modus operandi of the purchases? A. Mr. Seep has his principal office at Oil City, Pennsylvania, but he has his local agents at every important point throughout the oil-producing territory with reference to the convenience of the producers in reaching the office and selling their oil and getting their money.

Q. Does the producer sell this directly to the Seep Agency? A. He does; yes, sir.

Q. Then, where is the oil purchased—at the wells? A. The oil is purchased after it is run into the pipe line. The pipe line company takes it from the well and gives the producer a ticket showing the amount run, and that ticket is the thing sold by the producer.

Q. That is, the pipe line gives the producer a certificate? A. Yes, sir.

Q. And is it that certificate which is sold by the producer to the Seep Agency? A. Yes, sir.

Q. That certificate or balance receipt evidences the quantity of oil that the producer has in the pipes? A. Yes, sir.

Q. Is that correctly stated? A. Yes, sir; that is correctly stated.

Q. After the producer gets his certificate what may he do with it? A. Well, he may keep the oil in the pipe line for thirty days, as I recall it, without any cost for storage, if he thinks that during those thirty days the market conditions may improve, or he may keep it indefinitely in the storage tanks of the pipe line at the stated storage charge. That is fixed by the pipe line.

Q. Do you remember what that storage charge is? A. My recollection is that in all the local lines now it is 25 cents a day for a thousand barrels.

Q. So that on the payment of 25 cents a day storage per thousand barrels the producer may keep his oil indefinitely on these certificates? A. Yes; or as a credit balance.

Q. In those fields where the Seep Agency purchases its oil, can you state whether there are other purchasers of crude oil than the Standard Oil interest? A. Oh, there are other purchasers of crude oil in pretty much all the oil-producing sections.

Q. Are they purchasing the crude oil from the pro-

ducer in competition with the purchasers representing Standard Oil interests? A. They are.

Q. And has that been the case during all these many years that you have been connected with the industry? A. It has, or substantially so.

Q. What, if anything, may the producer do with his certificate in so far as disposing of it is concerned? A. Oh, he may sell it to any buyer that he pleases.

Q. How would the purchaser of the certificate or credit balance get the oil so purchased from the pipe line company? A. The pipe line company has stated delivery points at which it would deliver on the certificate as submitted to it.

Q. Are those delivery points railroad points? A. Railroad points.

Q. Do you mean by stated delivery points stated railroad delivery points, where the oil would be taken by the railroads and transported if required? A. I am speaking now of the gathering, the local lines.

Q. These certificates are issued by what lines? A. The United Pipe Lines, a division of the National Transit Company.

Q. What are the United Pipe Lines? A. They are the local gathering lines in the older part of the oil-producing regions.

Q. Can you give us an idea, based upon your experience in that connection, of how well the producer, in so far as the question of the gathering and handling of his oil is concerned, has been taken care of by the pipe lines owned and controlled by the Standard Oil interests, and if so, will you please do so? A. My answer would be that the service of the United Pipe Lines and of the pipe lines of the Standard Oil interests throughout has been most satisfactory to the producing class, to the producers of oil. It has given them a prompt and steady outlet for their products, and they as a body realize the efficiency of the service and the fairness of the prices paid. Speaking generally, I should say that as a system it is the most perfect system for the handling of a commodity that can be found anywhere on earth, and it is so considered by the great body of oil producers.

(Archbold, vol. 17, pp. 3235-3236.)

3. Crude oil prices.

The Standard Oil Co. fixes the price which it will offer, from time to time, for crude oil. It has no means of fixing the

price at which the producer will sell except to make its offer attractive. The principles which govern the Standard in fixing its offering price are stated at length by Mr. Archbold (vol. 17, pp. 3236-3238) :

" Q. It has been charged by the Government in this case that the prices which the Standard Oil interests pay for crude oil are arbitrarily made by the Standard Oil interests. Will you please tell us, if you can, how crude oil prices are arrived at; that is, I mean the prices which the Standard Oil interests offer the producer for the crude oil purchased? A. Well, I think I should answer that question first generally by quoting a circular which the Standard Oil interests issued to the producers when the present system was inaugurated many years ago, that they would at all times pay the highest price which the markets of the world will justify for the crude oil. Now, I can go into a very considerable particularization of the way in which it is currently reached, if you wish me to do so.

Q. I would like to have you do so. A. Of course, in the first place, the general question of supply and demand is taken into consideration, and on that, as on many other features affecting the price, we are in receipt of daily information from the world over as to the causes that would tend to and that do influence the price for crude oil. We take those reports into consideration primarily. We take into consideration the question of availability of the product in the district in which it is produced. We take into account the yields in various products from the crude oils produced in the different sections, because the crude oils of the different sections vary greatly in quality.

Q. Just what do you mean by the yields of the crude? A. I mean in the process of distillation that the products of certain of the crude oils are much more valuable than those of others. Take, for instance, the crude oil production of the mid-continent field and of Illinois. It is of inferior quality. It is a heavy oil, and the products obtained from it are of much less value than are the products obtained, if you please, from Ohio and Indiana oils, and they in turn are much less valuable than are the products obtained from the Pennsylvania crude oil, so called, and under the term "Pennsylvania" I would include the product of West Virginia, of southeastern Ohio, and some portions of Kentucky, where the oils from these latter sections are the best crude oils produced; that is, they give the

best resultant yields, the most valuable products. Of course it costs more to produce the oil in Pennsylvania, and therefore a price is paid there to stimulate in that respect.

Q. Will you go on with your explanation in detail of any other elements that enter into the making of the price ? A. Yes. The question of the volume of production must be taken into account also. The mid-continent field is producing a quantity of oil that it is impossible to market, and it must, therefore, seek a level at which some new use can be made for it, such as fuel, if you please, or where people are willing to invest capital in its storage, involving the purchase of land, the erection of tanks, and the care of the oil for an indefinite period awaiting a market, and during that period also there is a depreciation in the value of the crude oil stored, because the lighter parts evaporate and the heavier parts become difficult of distillation and there is a general depreciation. All of these considerations are taken currently into account in the effort to find the fairest basis of price possible which to offer in these various sections.

Q. Take it in the mid-continent field. Do I understand you to say that the price of the oil there has any relation to its use as fuel rather than its use merely as an illuminant ? A. It is practically, and has been for a long time, at that point. It is really coming into competition with coal for use on the railroads in a large way, and for general manufacturing purposes as a fuel.

Q. What relation has that to the price paid for crude oil ? A. Well, it seeks that level to find a market.

Q. Are there any other elements that enter into the question of crude oil prices than those which you have mentioned ? A. Of course a very important element is the competition of foreign oil fields. We are having of course very serious competition now in many sections of the world. That has to be taken into consideration currently.

Q. Just what do you mean by that ? A. I mean that oil is being produced in different sections of the world and marketed to a very large extent, and in our effort to hold our position in foreign markets we must reckon currently with the offerings from those fields.

Q. That is to say, the crude oil which you purchase in this country to some extent—the exact extent I shall develop later—is sold in the markets of the world and against the product of the world's markets ? A. Yes, sir.

Q. And do I understand that that has any relation to this question of price? A. Oh, a very marked relation, a very important relation.

Q. Well, the price which you pay for crude oil is how related, then, to the export price of crude oil? A. We find currently at what price we can sell the finished products in the markets of the world, and that is a feature entering into our consideration of the price we can pay for crude oil here.

Mr. Benson, a witness called on behalf of the Government, testifies in respect to the charge that the Seep agency fixes the price of crude oil, as follows (vol. 1, p. 228):

CROSS-EXAMINATION BY MR. ROSENTHAL:

Q. You say the Seep Agency fixes the price of crude oil. What do you mean by that, Mr. Benson? A. I mean that Joseph Seep makes a price at which everybody sells that sells to the Standard Oil Company or its affiliated interests.

Q. All you mean by that is that the Seep Agency, representing the Standard Oil and the Standard Oil interests, offers a certain price for crude oil to the producers of crude oil, and those producers are at liberty to sell at that price, if they wish to sell? A. Yes sir.

Q. The other producers of crude oil are under no obligations whatsoever to follow that price unless they wish to, are they? A. Certainly not.

The Standard Oil Company, in order to obtain oil, has to pay the price determined by market conditions, among which competition plays its full part. The testimony of Mr. Litchfield shows that, in Kansas and Oklahoma, the Prairie Oil & Gas Company pays 41 cents per barrel for oil, while its chief competitors pay anywhere from thirty to thirty-five cents. (Litchfield, vol. 16, p. 2661.) The prices of Lima and Indiana oil, of which the Standard Companies are the chief and almost the only purchasers, have risen from fifteen cents a barrel to one hundred and five cents a barrel, and have been as high as one hundred and thirty cents. (Burton, vol. 16, p. 2638.) In the Pennsylvania field, with declining production, the prices have steadily increased, though of course the competition of the western oils has tended to keep them down.

4. Producers satisfied.

The producers of oil who would be the class primarily affected if the Standard Oil Company monopolized the purchase of crude oil through its ownership of pipe lines, have no grievance against the Company. Mr. Emery testifies to the great efforts made by the Pipe Line Companies to reach every new well with their lines and to provide storage for the output (Emery, vol. 6, p. 2745). Not one witness has appeared on behalf of the Government to allege that the prices paid by the Standard Oil Company are unduly low, or are in any sense arbitrary or oppressive. In the Mid-Continent field, where the pipe line system is a private line owned by the Prairie Oil & Gas Company and where, if anywhere, the Standard Oil Company is in a position to take advantage of the producers, the Standard Oil Company pays 41c. a barrel for oil, while its chief competitors pay from 30c. to 35c. The fairness of its dealings with the producers is testified to by Litchfield, Barnes, Greenlees, Geiser and Johnson (vol. 16, pp. 2664-5, 2715, 2717; 2747, 2774; 2840-1; 2779, 2783-2784, 2786). Similar testimony from the Ohio field is given by Watts (vol. 16, p. 2708). All the evidence in the case fully corroborates Mr. Archbold's statement (vol. 17, p. 3236):

"My answer would be that the service of the United Pipe Lines and of the pipe lines of the Standard Oil interests throughout has been most satisfactory to the producing class, to the producers of oil. It has given them a prompt and steady outlet for their products, and they as a body realize the efficiency of the service and the fairness of the prices paid. Speaking generally, I should say that as a system it is the most perfect system for the handling of a commodity that can be found anywhere on earth, and it is so considered by the great body of oil producers."

5. Sales to independent refiners.

The charge made by the Government that independent refiners have been coerced into selling their export oil to the Standard through its control of the pipe lines, is utterly without foundation.

The fact that the independent refiners purchased from the Standard instead of purchasing directly from the producer has nothing to do with the Standard's control of the pipe lines. It

is entirely due to the fact that it is much more convenient for them to purchase from the Seep purchasing agency at one-quarter of one per cent. commission than to maintain purchasing agencies of their own dealing directly with the producer. The elaborateness of a purchasing system sufficient to obtain a supply of oil in large and regular quantities in the Pennsylvania field is evident from the fact testified to by Mr. Emery, (vol. 6, p. 2744) that the 136,000 wells in the entire Pennsylvania field produce 58,000 barrels of oil a day, or less than one-half of a barrel to the well. It takes an elaborate and well organized system to obtain from such sources large and regular supplies of oil, and nothing prevents the independent refiners from maintaining such a system except that they find it cheaper and easier to buy from the Seep agency.

The charge that restrictions were put upon the independent refiners coercing them into selling their export oil to the Standard is most extraordinary, in view of the actual facts. Mr. W. H. Tilford (vol. 1, pp. 173-176) testifies :

Referring to Exhibit 15 annexed to the petition, and having identified the companies named therein in a general way as having been engaged in refining oil at the time mentioned, and as having bought crude oil for a period of years from the Standard Oil Companies, he testified that the crude oil so sold to the companies named in the said exhibit was what is designated in the trade as "Pennsylvania oil," coming from Pennsylvania, West Virgina and Southern Ohio; that the Standard had other customers for this crude, and that the demand of its own companies for the same crude was large; that the supply of this Pennsylvania oil had been decreasing for a period of years. He then continued :

Q. Had the demand of this group of refiners been increasing all the time? A. Yes, sir, very rapidly.

Q. Will you give me the figures that would show that? A. We sold the refiners in this group, or substantially this group—anyway, we sold refiners in western Pennsylvania, in round figures, 302,000 barrels of crude oil for the year 1896. That increased until we sold them 1,750,000 barrels in 1903, or nearly 600 per cent.

Q. Per year? A. That is for the year, yes, in both cases.

Q. And had that increase from 300,000 barrels, in

round figures, a year, in 1896, to 1,700,000 in 1903, been a gradually increasing quantity ? A. Yes, rather rapidly during the last few years preceding 1903.

Q. And from, as I understand you, a declining field ?
A. Yes sir.

The witness said that this oil was a superior crude oil for which there was a great demand, and which was regarded as the finest crude oil produced ; also, that he had participated in the making of the arrangements embodied in Exhibit 15 in 1903 ; that about that time the refining companies mentioned in the agreement had been notified that all of their increasing orders could not be filled ; and that the Standard's agent in the oil regions had arranged for a meeting of these refiners, to see if some sort of an arrangement for selling them crude oil could be made ; that the witness attended such meeting in Buffalo, and met there a number of the independent refiners, who had organized an association ; that the new arrangement expressed in Exhibit 15 grew out of that meeting ; Mr. Tilford further testified as follows :

Q. Will you give me, Mr. Tilford, an idea of what, since that time (1903 down to date), has been the total product from the crude supplied by you and the amount that has been sold to the Standard for export ? A. For the three years ending December 31, 1906, we sold those refiners in western Pennsylvania and Ohio a trifle over 4,500 barrels of crude oil a day, 365 days in the year, those particular refiners.

Q. Yes, this group of refiners ? A. This group of refiners.

Q. 4,500 barrels a day ? A. A trifle over 4,500 barrels per day, based on 365 days a year.

Q. Of crude oil ? A. Of crude oil. They sold us, during the same period, an average of 427 barrels per day.

Q. Barrels per day ? A. Yes sir.

Q. So that, under this arrangement, they sold to the Standard for export, a tenth of their product, about a tenth of their product, from the crude oil furnished them by the Standard ? A. I wouldn't say a tenth of their product, because I don't know what their product was. They sold barrels of refined oil, which was about one-tenth in quantity of the quantity of crude oil sold.

Q. Very well, then, that corrects my question. They sold barrels of refined oil one-tenth of the quan-

tity of the barrels of crude oil that the Standard had supplied ; that is so ? A. Substantially.

Q. And the rest of their product, as you understand, was refined oil that they sold in the domestic market ? A. I suppose they did ; I don't know where they sold it. They sold it to somebody other than to our company.

Q. So that for those three years, the amount of oil that has been sold to the Standard under this agreement has been about 425 barrels a day on an average. A. 427, to be correct.

It was stipulated (vol. 20, p. 457) that the sale of crude oil made by Standard Oil Companies to the refiners named in Exhibit 15, above referred to, during the first six months of 1907, amounted to 825,845 barrels.

The fairness and reasonableness of the agreement with the independent refiners for the purchase of their export oil appears so fully from the memorandum annexed to the Bill as Exhibit 15, that no comment upon it is necessary.

The contract between the National Transit Co. and the Tidewater Oil Co., for the sale to the Tidewater Oil Co. of two to three thousand barrels of crude oil a day at the option of the Tidewater, is another instance where a competitor has seen fit to avail itself of the facilities afforded by the Seep purchasing agency in obtaining crude oil.

The Standard Oil Companies are under no sort of obligation to extend the facilities of the Seep agency to other refiners. If they choose to do so they may fairly ask as an equivalent that their foreign marketing companies be permitted to handle the export oil of the refiners to whom such facilities are afforded. The fact that the Standard interests are willing to utilize their purchasing agency and their foreign marketing companies to supply crude oil to, and to dispose of the product of, independent refiners, in itself affords the best possible proof that their aim is not monopoly.

II. TRUNK LINES.

1. The trunk lines as a practical matter have never carried oil for anyone except the Standard Oil Companies, and have never been asked to do so. (Payne, vol. 1, p. 335 ; J. D. Archbold, vol. 17, p 3432 ; Towl, vol. 17, p. 3612). The reasons that prevent others from making use of the trunk lines are inherent in the nature of the business. The fact that they

are not used by others is not due to any obstacles put in the way of such use by the Standard Oil Companies. The reasons are : first, that the pipe lines are in their nature adjuncts to a refinery business, and the idea of operating them as independent common carriers is illusory ; second, they necessarily have to transport oils of different kinds and qualities, and the resulting contamination practically prevents their use except in cases where the oils of different grades are all owned by the same interests. This statement will be extended at a later point. (*Post*, pp. 194 and 210).

2. The charge that the pipelines in New Jersey and Maryland were conveyed to the Standard Oil Co. (New Jersey) by the National Transit Co. and the New York Transit Co., in violation of the latter companies' obligation to the public and for the purpose of preventing the use of the pipe lines by independent shippers desiring to ship oil to the seaboard, is utterly unwarranted. The pipe lines in New Jersey and Maryland were conveyed to the Standard Oil Co. (New Jersey) in 1905, more than a year before the passage of the Hepburn Act (Payne, vol. 1, p. 365). These lines had been in existence for a great many years. The companies owning them were not organized under the laws of New Jersey and Maryland, and had none of the rights or obligations of common carriers in either of those States (Payne, vol. 1, p. 367). The lines in New Jersey and Maryland have been constructed on private rights of way (*id.*) They have never transported oil for anyone except the Standard Oil Companies, and had never been called upon so to do (Payne, vol. 1, p. 335 ; J. D. Archbold, vol. 17, p. 3432 ; Towl, vol. 17, p. 3612).

After the conveyance in 1905, the National Transit Co. and the New York Transit Co. continued to deliver oil at the State lines to the Standard Oil Co. (New Jersey). In the Fall of 1906, the Hepburn Act was passed, and under this Act the National Transit Co. and the New York Transit Co. filed or concurred in tariffs, naming among the points at which they would deliver oil the points on the State line of New Jersey and the State line of Maryland where they were delivering oil to the Standard Oil Co. (New Jersey). In order to put themselves in a position to comply with the requirements of the statute in case anyone else desired the delivery of oil at those points, the companies provided tankage at Centerbridge, Union-

ville and Fawn Grove. The Standard Oil Co. (New Jersey) constructed pumping stations at those points, and thereafter received the oil from the pipe line companies at those points, and itself pumped it forward to the points of final delivery (Payne, vol. 1, pp. 363-367). Anyone who desires so to do can ship oil by the trunk lines to Centerbridge, Unionville or Fawn Grove, and take it there from the tanks provided for by the pipe line companies. The Government makes the point that no independent refineries are located at these places. There is nothing to prevent independent refineries from being located there or from constructing private pipe lines to their refineries from those points. The suggestion that the terminus was fixed at remote points on the State lines in order to prevent independents from making use of them, and that thereby independents have been prevented from making use of them, is somewhat absurd. The lines which have filed tariffs with the Interstate Commerce Commission have stations at Marcus Hook and Philadelphia, which are two of the greatest independent refining points. They have stations at Buffalo and many other centers (Payne, vol. 1, pp. 368, 335). The practical difficulties in the way of employing the trunk lines as common carriers have prevented outsiders from shipping oil to any of these points.

THIRD. The charge that the defendants have exacted excessive and unreasonable rates for the carriage of crude oil and rates which were discriminatory against competitors of the Standard Oil Company is unfounded.

I. There is not an iota of evidence that there has been any discrimination in rates. On the contrary, the defendant companies for whom the pipe line companies have transported crude oil have invariably paid the full rates.

II. Rates not unreasonable.

1. To establish its contention that the rates for transportation through the defendants' pipe lines are unduly high and

indicate monopoly, the Government relies upon the large nominal profits made by the Standard pipe line companies. This argument is not sound.

The nominal profits of Standard Oil pipe lines are not due to exorbitant rates, but to the fact that pipe lines were built, and have been extended and developed, as factors in a great business which includes the purchasing and storing of crude oil, the operation of great refineries and the marketing of the products. The location and capacity of the pipe lines have been determined by their relation to the other branches of the business, with the result that in their practical operation they are used at all times to their full capacity, except so far as the failure of oil fields has limited their use (Payne, vol. 1, p. 360; Archbold, vol. 17, pp. 3254-5). Mr. Payne testifies (vol. 1, p. 360) :

Q. Did you ever know of a pipe line being built excepting to connect particular refineries with the oil fields? A. I never knew a pipe line to be built that was not built to take care of the owner's own production, or to convey all to the refinery that the investor in the pipe line owned; either for one purpose or the other, or sometimes both; taking his own oil from his own well and conveying it to his own refinery.

2. The Government has introduced a considerable amount of evidence to show the relation between the cost of transporting each barrel of oil carried by the pipe lines and the nominal charge made for such transportation. From this comparison, the argument is made that the charges of transportation are inordinately high. The calculation made by the Government, of course, leaves out of consideration a most important element, to wit, the fact that the life of the pipe line and its earning power are necessarily limited, and it is wholly uncertain to how short a time its usefulness will be limited or how rapidly its earning power will depreciate. But the vitally important element which is not taken into consideration is this: The operating expenses, for the most part, are fixed, the profits vary with the volume of business; therefore, the ratio of profits to operating expenses is dependent on the volume of business. If each pipe line is to be considered separately, the situation is this:

It has in the Standard Oil Company a great shipper, which so regulates its shipments as to yield the pipe line the maximum possible profit. No one else has any right to complain because this profit is large. The fact that the shipper so regulates its shipments because it is the owner of the pipe line and the profits of the pipe line are its profits makes no difference to anyone else. To prove that the pipe line charges in themselves are exorbitant, it would be necessary to find for comparison cases where pipe lines were operated as separate independent enterprises, acting solely as common carriers and having no shippers especially interested in enhancing their profits. No evidence whatever has been introduced to show that pipe lines so constructed charging the same rates that are charged by the Standard Oil Companies would be particularly profitable enterprises. If independent pipe line enterprises offered such returns as the nominal profits of the Standard Oil pipe lines, (due almost altogether to payments made by the other Standard Oil Companies), unlimited capital would be available to duplicate the Standard Oil pipe line system.

3. All the evidence in the case indicates that the gathering charge of 20c. per barrel made by the Standard Oil Co. gathering lines is the proper and reasonable, and almost universal charge. It is the charge fixed by Law in West Virginia (Laws of W. Va., 1891, Ch. 44, Sect. 7). Where a different scale of gathering charges has been adopted, they are just as high, for example: The Texas Company, the pipe line from Glenn Pool, Indian Territory, to points in Texas, charges for "gathering, preliminary to receiving same (crude petroleum) into the main trunk line, 20c. per barrel where the distance is 15 miles or more" (Def. Ex. 221, vol. 19, pp. 608-9). The average length of the gathering lines connected with the Standard Oil trunk lines is from 18 to 20 miles (Page, vol. 16, p. 2974).

4. If a wider view is taken of the pipe line profits, it will be seen that the actual capital on which the profits of any particular pipe line are made is vastly greater than the capital invested in such pipe line. The investment of the Standard Oil Companies in crude oil is part of the investment on which the pipeline profits as a whole are made. The losses and expenses and hazards of this investment are to be counted against pipe line profits (*ante*, p. 93).

The refining plants which enable the Standard Oil Companies to use the pipe lines to their full capacity are in a measure part of the investment, and so also are the marketing stations and the foreign companies which enable the refining companies to take and dispose of the crude oil carried by the pipe lines. More immediately, the millions of dollars spent in the Prairie Oil & Gas Co. and in the Ohio Oil Co. were necessary to preserve the value of the lines in Ohio, New York and Pennsylvania, and as a general proposition, the investment of each amount spent in the construction of a new trunk line or new gathering system is to be counted against the pipe lines, whose earning capacity is preserved by such investments.

5. This review of the situation makes evident the illogical character of any argument founded on the profits of the pipe lines. The profits of the pipe lines form part of the general profits of the Standard Oil business as a whole. The charges for carrying oil, which go to make up those profits, are almost altogether paid by the other Standard Oil Companies. The pipe lines were constructed as adjuncts to the business as a whole. Their importance to the business does not depend on the profits they make, but on the fact that they afford facilities which are essential to the conduct of the business on the present scale and greatly reduce the expense of doing business. The proportion in which the profits as a whole are divided between the pipe lines and the other companies is a matter of no consequence. As stated elsewhere in the discussion of the subject of profits, all profits derived from pipe line transportation are merged in and form a part of the total net profits of the Standard Oil Co. (New Jersey), and appear in its balance sheets. The only reasonable way to judge of the subject of defendants' profits is to consider them, not in part, but as a whole, and in reference to the total amount of capital invested in the entire business. As hereafter shown (*post*, p. 519) these total net profits of the defendants have been reasonable.

FOURTH. The defendant companies which have filed or concurred in filed tariffs have fully performed all the duties which in any view of their legal status it can be claimed they are or ever were liable to perform.

I. Such companies are the following:

Name.	State of Organization.
National Transit Company -----	Pennsylvania.
New York Transit Company -----	New York.
Southern Pipe Line Co. -----	Pennsylvania.
Crescent Pipe Line Co. -----	do.
Northern Pipe Line Co. -----	do.
Indiana Pipe Line Co. -----	Indiana.
Buckeye Pipe Line Co. -----	Ohio.
Eureka Pipe Line Co.-----	West Virginia.
Southwest, Pa., Pipe Line Co. -----	Pennsylvania.
Cumberland Pipe Line Co.-----	Kentucky.

Of the foregoing companies, no interstate shipments originate with the following:

Northern Pipe Line Company,
Crescent Pipe Line Company,
New York Transit Company,
Southern Pipe Line Company.

As to all interstate shipments passing through their lines, these companies last named have respectively filed with the Interstate Commerce Commission concurrences in the various schedules of rates filed by the companies upon whose lines such interstate shipments originated. All the remaining companies above named have duly filed with the Interstate Commerce Commission all tariffs required by the Interstate Commerce law. Such tariffs were filed in or about the month of August, 1906, or shortly thereafter, and must be presumed to have been satisfactory to the Interstate Commerce Commission.

II. In support of its allegations concerning the performance by the above named defendants of their alleged duties, the petitioner has placed in evidence a condensed table of the tariffs filed or concurred in by such companies with the Interstate Commerce Commission and the full text of several of such tariffs (Pet. Ex. 39-49, vol. 7, pp. 124-150). Also certain balance sheets of pipe line companies (vol. 7, pp. 154-233, 367, 405; vol. 8, pp. 612-623; also condensed tables of pipe line rates vol. 7, p. 124).

III. There is no proof in the record that the rates stated in the tariffs as filed are in themselves excessive or unreasonable.

These rates are the same as the rates prevailing prior to the Act of 1906, and everything that has heretofore been said on the subject of charges by the pipe lines is applicable to them. It may be added that they were for the most part fixed many years ago and have continued substantially without change down to the present time. Neither independent shippers nor the Interstate Commerce Commission have raised any question as to their reasonableness.

IV. Facilities for independent shippers and refiners.

1. There is no proof in the record that the defendant companies which have filed or concurred in pipe line tariffs, or any of them, have refused to furnish equal or any facilities for the receiving or delivering of oil of independent refiners or shippers, and such is not the case.

2. The various pipe line tariffs offered in evidence by the Government are conclusive proof that the companies filing and concurring in them have offered to independent shippers and refiners precisely the same facilities which they offered to Standard Oil shippers and refiners. These tariffs mention as receiving points all points at which oil is collected for shipment to the points of destination named in the various tariffs from the respective producing fields tributary to the lines of the respective companies and such points are all the possible points of origin of interstate shipments in the respective fields. The tariffs also name as points of destination to which oil will be transported for any shippers, including independents, the terminals of the lines and all intermediate points at which oil

is now or was, prior to the filing of said tariffs, delivered to any Standard Oil refiner or other interest.

3. If, by the charge that the companies which have filed or concurred in such tariffs fail "to deliver oil at the stations along their lines where the said shippers and refiners desire the said oil to be delivered," it is meant that delivery points have not been provided wherever it might suit the convenience of a shipper or refiner to ask that the same be established, it may be said

- (a) There is no proof that any request for the establishment of any such delivery point has ever been made, and such is not the fact;
- (b) Delivery is not made, even to Standard Oil interests, at any points except those named in the tariffs, and could not be for the reason that,
- (c) it is impossible to deliver oil from a pipe line, except at points where there is large tankage.

Tankage occurs only at certain pumping stations, and usually at terminal stations. Intermediate pumping stations are not commonly provided with tankage, and if they are, the stations are generally situated at points entirely unsuitable for refining purposes, their location being determined by engineering considerations and by convenience to coal and water (*Towl*, vol. 17, p. 3598). From Morgantown to Millway on the Southern Pipe Line, a distance of 210 miles (vol. 16, p. 2977), there is no pumping station provided with tankage and presumably, therefore, no point at which deliveries could be made (*Vandergrift*, vol. 16, p. 3005). To assume that a connection for delivery could be made with a pipe line at any point intermediate between tankage stations is the most mid-summer madness, as is evidenced from a consideration of the testimony in regard to the operation of pipe lines discussed hereafter (*post*, pp. 194-5). The charge is without any proof and is based upon an utter lack of knowledge of the conditions of operating pipe lines.

V. The charge that "at other times they (the defendants companies) have refused to transport oil belonging to others than the defendants and their associated companies," so far as

it relates to the companies filing or concurring in said tariffs, is unsupported and is disproved by the testimony of Mr. Towl already quoted (vol. 17, p. 3612).

FIFTH. The tariffs filed in or since August, 1906, do not impose upon independent shippers unreasonable conditions as to quantity.

1. The tariffs in evidence (Pet. Exs. 39-49, vol. 7, pp. 124-150) show the various minimum amounts which will be accepted under the various tariffs for transportation. The language concerning these minimum requirements is substantially the same in all the tariffs and a single example will suffice: In Petitioner's Exhibit 45 (vol. 7, p. 140), being a tariff of the Indiana Pipe Line Company in connection with others for transportation from Griffiths, Indiana, to Unionville, New York, the provisions are as follows (italics ours):

“SECOND. It will forward such crude petroleum, when there has been tendered to it by a shipper *individually or by him and others*, a quantity of the same kind and quality of crude petroleum, amounting in the aggregate to not less than 300,000 barrels, all of which shall be consigned for delivery to the same delivery point.”

* * * * *

“FOURTH. Orders for the shipment of any specified kind of such crude petroleum shall only become effective when orders from the shipper, *in connection with orders from other shippers*, for the same kind and quality of petroleum shall amount in the aggregate to three hundred thousand (300,000) barrels, or more, consigned to the same point of delivery; and subject to this requirement, orders for shipment shall become operative in the order in which they shall have been received.”

The amounts of these various minimum shipments, which will be accepted under the respective tariffs, were determined in good faith by a body of experts after a consideration of all the conditions connected with the transportation of oil through the respective lines and between the respective terminals named. Mr. Forrest M. Towl, Civil Engineer, graduate of Cornell Uni-

versity, for twenty-two years connected as Engineer with the Standard Oil Pipe Line interests, testified as follows (vol. 17, p. 3603-4) (italics ours) :

" Q. * * * Were you called upon to advise in regard to fixing the amounts of those shipments ? A. Yes sir.

Q. Alone, or with others ? A. With others.

Q. The others were experts like yourself ? A. They were men who were interested in the work ; had been handling the oil.

Q. Was this presented to you as an expert question to decide or to advise ? A. As a practical operating question, I should say, more than as an expert—a practical operating question.

Q. What considerations entered into the determination of these amounts by yourself and your colleagues ? A. The consideration of the complexity of the system through which the oils would have to go and a *knowledge of the conditions that we had met; that we had had to handle the oil in large batches in order to prevent the mixing.*

Q. How did the complexity of the system bear upon the problem ? A. We knew that there was a mixture in the longer lines. We knew that there was a still further mixture, due to the parallelling of lines of different sizes —whether the oil goes into the tanks or does not go into the tanks when it passes through the various connections. They all bore upon the question ; * * *

Q. And the capacity of the line ? A. The capacity of line, and whether the line was a continuous line or branched out at some junction point to various places.

Q. These you considered as bearing upon the question of the amount of mixture, did you ? A. Yes, sir.

Q. How did all these circumstances influence you in determining the particular amount that you fixed upon ? A. *The amount of 300,000 barrels for points from the western part of Ohio east was a number that we had been observing for several years prior to this time* (p. 3604).

* * * * * Why is it any better to move 300,000 barrels at one time than 50,000 at one time, as far as the contamination is concerned ? A. The contamination is so much smaller in proportion (p. 3604). * * *

Q. Is that the point of view in which engineers view the matter in determining these amounts, or is that one of them ? A. That is one of them ; yes sir.

Q. You say that several years before these tariffs were issued these amounts of tenders, or substantially those amounts, had been observed ? A. Yes sir.

Q. That is, *the Standard Oil shippers had been required to comply with them, had they?* A. Yes sir.

Q. *And they had complied with them?* A. Complied with them ; yes sir.

Q. So that when you advised these amounts, you were not then entering upon any radical change in the policy ? A. No sir ; it was simply formulating our practice.

Q. Practices by which the Standard Oil shippers had been governed ? A. By which the Prairie and Ohio Oil Companies and Trainor were governed " (pp. 3604-5).

The foregoing testimony, which was not contradicted or weakened in the slightest degree, proves conclusively that the fixing of the minimum shipments under the tariff was done in good faith by the men best qualified to judge what were the proper amounts to transport in the practical operation of the Standard's pipe lines. So far as this case is concerned, the defendants might stop here. But they have gone further and have shown affirmatively that these large minimum requirements are absolutely necessary under the conditions attending the transportation of crude oil through lines of the complication and great length which characterize the defendants' pipe lines.

2. The tariffs place the Standard Oil shippers upon the same footing as independent shippers, so that the latter can ship fractional amounts of the required minimum by uniting with the former.

(a) Mr. Towl testified (vol. 17, p. 3603) :

"Q. In the manner in which the business of the Standard Oil interests is managed, so far as conveying crude oil through the pipe lines, who are regarded as the shippers of the crude oil—I mean among the Standard Oil interests ? A. The Prairie Oil & Gas Company, the Ohio Oil Company, and P. S. Trainor are the principal shippers."

Mr. Towl was asked (vol. 17, p. 3605) how the defendants have construed the words "other shippers" in the following

provision, which is found in substantially the same language in all the tariffs :

"FOURTH: Orders for the shipment of any specific kind of such crude petroleum shall only become effective when orders from the shippers in connection with *orders from other shippers* for the same kind and quality of petroleum shall amount in the aggregate to 300,000 barrels or more consigned to the same point of delivery," &c.

His reply was that it includes "every one that ships over the line; Ohio Oil Company, Prairie Oil & Gas Company and Trainor, and any one else that might choose to offer any oil;" also that said three Standard Oil shippers were included in the entire class of shippers in making up the minimum amount of the tender, and that the provision quoted was construed in practice to mean that if any independent shipper could furnish an amount of crude petroleum of the same kind and quality as that which had been tendered by one or more of the Standard Oil shippers, and if his tender and theirs together made up the 300,000 barrels all consigned to the same point of delivery, the pipe lines were bound to take his shipment and would take his shipment.

We quote also Mr. Towl's testimony on cross examination in response to Mr. Kellogg (vol. 17, p. 3617-18) :

"Q. Now, as I understand you, this tariff means that if a shipper wishes you to take 5,000 or 10,000 barrels of Western Pennsylvania oil of the same grade that you are running for P. S. Trainor, you will take that 10,000 barrels and deliver him an equal quantity at the delivering station? A. Subject to the mixture with which it probably goes. We can not undertake to deliver him that 10,000 or anywhere near it.

Q. Oh, I understand. But if you are running 75,000 barrels or 70,000 barrels for P. S. Trainor, of Western Pennsylvania oil, of the high-grade oil, and another shipper offers you 5,000 barrels of that same grade of oil, that same general grade, you consider P. S. Trainor as a shipper, so that you will take this man's 5,000 barrels? A. Yes, sir.

Q. And you mix it with Trainor's and deliver him an equal quantity? A. Yes, sir.

* * * * *

Q. Is the public to understand that a shipper means any of the Standard Oil companies ? A. Why certainly.

Q. That is what you understand it ? A. Certainly ; anyone would understand it that way by reading it."

* * * * *

MR. KELLOGG : I would be glad if that is the case.

MR. CRAWFORD : Certainly. There is no other construction to be put upon the language.

MR. KELLOGG : I am very willing to accept that."

The foregoing testimony, which is quite uncontradicted and the strongest part of which was brought out by petitioner's counsel and its conclusions assented to by him, proves beyond question that, under the construction of the defendant companies themselves, the independent shippers, if there were such, would be placed exactly upon the same footing as the Standard Oil shippers in respect to the amount which would be received from them for shipment, and that it is perfectly easy for such independent shippers to have comparatively small amounts of crude oil transported through the lines of the defendant companies which have filed or concurred in the tariffs by combining, as indicated, with one or more of the Standard Oil shippers.

(b) Moreover, no other conclusion can be arrived at from the language used in the tariffs, in view of the testimony of Mr. Towl that the three principal Standard Oil shippers named are regarded in the conduct of the business as being " included in the entire class of shippers " and are treated exactly as are independent shippers.

3. The foregoing evidence disposes of the charges as to the alleged refusal to transport oil for others, except in such large quantities as to prevent independent producers and refiners from making use of the defendants' pipe lines. But the good faith of the tariff provisions relating to minimum shipments is further shown by the following facts :

(a) For some years prior to the filing of the tariffs referred to, substantially the same minimum requirements as to size of shipments had been imposed upon the Standard Oil shippers and had been rarely departed from. Since the filing of the tariffs, the minimum requirements have been rigidly observed by Standard Oil shippers.

Mr. Towl testified (vol. 17, p. 3604-5) that for several years before these tariffs were issued, the same amounts of

tenders, or substantially those amounts, had been observed; that is, Standard Oil shippers had been required to comply with them, and had complied with them.

Again, in answer to Mr. Kellogg (vol. 17, p. 3609) Mr. Towl said :

" Q. Isn't it a fact that at times you pumped very much less than 300,000 barrels in batches ?

MR. CRAWFORD : From where to where ?

MR. KELLOGG : From the Lima-Indiana field and Western Pennsylvania to the seaboard.

A. I do not think it could be considered as a fact at all. There were possibly a few batches in the early experimental stage that came along that were less than that. Take two years prior to that; I am confident that there were not half a dozen batches of less than 300,000 barrels handled through those lines."

Asked by Mr. Kellogg (vol. 17, p. 3610) whether, prior to 1904, and especially from 1890 down to 1900, less than 300,000 barrels of Lima-Indiana oil had been pumped, Mr. Towl said there were possibly some instances where this had been done.

But he explained later (vol. 20, p. 322) that the pipe line companies did not begin to move Illinois or Kansas crudes until 1905 or later, and that prior to that time the only crudes to be moved from Cygnet east were the Lima and Indiana crudes, which first came into contact with Pennsylvania crude at Bear Creek, Pa. From this testimony, it is obvious that it was immaterial what amounts of Lima or Indiana crude were moved at the period mentioned, until they reached the point of contact with Pennsylvania crude, where experience had shown that about 75,000 barrels was a sufficient minimum.

(b) Mr. Towl, who is an engineer of distinction in his profession, with twenty-two years of service in the construction and operation of pipe lines (vol. 17, p. 3598), and whose testimony is absolutely uncontradicted, was most positive in his further statements that crude oil could not safely be transported through the Standard's pipe lines over the distances named in the respective tariffs in batches less than the respective minimum amounts named in the various tariffs, the chief reason being the great amount of mixture or contamination which has to be contended with. Speaking of the proposal to transport and keep reasonably separate two sub-

stantially different grades of oil through the pipe line of the Prairie Oil & Gas Co. from Humboldt, Kas., to Whiting, Indiana, he says (vol. 17, p. 3615) : "They would have to make the limit of their amount at least 500,000 (barrels) to avoid, say, 20 or 30 per cent of contamination."

Mr. John Page, Civil Engineer, and a graduate of Cornell University, for many years engaged in the construction and operation of pipe lines (vol. 16, p. 2920) testified as to the same point (vol. 16, p. 2963) in answer to Mr. Kellogg : (italics ours.)

"Q. Suppose they (the pipe line companies) wish to run a certain amount of high grade oil to one refinery at the seaboard, and a certain amount of low grade oil to that refinery, keeping them separate, how is it done ? A. *They try to pump through as large blocks as possible, so as to make the contamination of as low per cent. as possible*, and they get through all they can of one and then of the other.

Q. It is practicable, then, in the transportation of oil, to pump through a low grade and then follow it with a high grade, or pump through a high grade and follow it with a low grade, *if a sufficient quantity of each is used at the time of pumping?* A. You can pump it through, * * * *, but of course there is so much contamination.

Again, referring to transportation from Western Pennsylvania to the Seaboard, Mr. Page said (vol. 16, p. 2969) :

"I would say 50,000 is altogether too small for the prevention of contamination."

Mr. Vandergrift, Field Superintendent of certain of the Standard Pipe Lines, including the Southern Pipe Line, from Morgantown, West Virginia, to Millway, Penn., with thirty years' experience in the practical operation of pipe lines (vol. 16, p. 2992), testified in reference to the transportation of crude oil through the Southern Pipe Line, where the minimum requirement is 75,000 barrels, that he did not recall any shipment as low as 50,000 barrels ; that he might possibly have had shipments between 75,000 and 100,000 barrels, but that generally the orders were above 100,000 barrels. (Vandergrift, vol. 16, p. 3016).

(c) The foregoing testimony in regard to the amounts of

shipments required of Standard Oil shippers, both before and since the filing of the tariffs, is amply corroborated by exhibits offered by the Government, being statements showing batches of oil pumped from various points named in the tariffs and from other points. These statements were produced under subpœna from the Government by Mr. Wm. W. Pilkington, who occupies a position with certain of the pipe line companies similar to that of traffic manager on a railroad. (Pet. Exs. 992-A, 992-B, 992-C, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, vol. 21, pp. 148-164). Mr. Pilkington testified (vol. 20, pp. 337-9) that exhibits 992-A, 992-B and 992-C showed shipments from Preble, Indiana, east only as far as Adgate, which is a distance of about forty miles; these shipments being subsequently taken on to Cygnet, where the large shipments were made up. Exhibit 993 shows shipments starting at Cygnet, Ohio (vol. 20, p. 337), but not all the shipments here shown were through shipments. Most of the amounts named in Petitioner's Exhibit 993 are obviously over 300,000 barrels, and those which are not so are to be accounted for as being intended to go only a part of the distance. Mr. Pilkington also testified (vol. 20, p. 343) that many of the shipments shown on these exhibits originated at points farther west than the point named in the exhibit; for example: shipments on Petitioner's Exhibit 992-C, marked as from Preble, really originated at Griffith, Indiana. So, in Petitioner's Exhibit 994, showing batches of oil received at State Line (Ohio) and pumped through Northern Pipe Line, these batches originated farther west. Where such is the case, it does not follow that the batch as represented in the exhibit is of the original size; part of it may have been diverted in other directions. The batch was probably considerably larger at the West. So as to Exhibit 996, the Newcastle oil, the Kansas oil and the Illinois oil originated farther west. (Pilkington, vol. 20, p. 343).

The record most easily traced is that contained in Petitioner's Exhibit 997, being a statement showing batches of oil pumped from Morgantown, West Virginia, to Millway, Pennsylvania, through what is known as the Southern Pipe Line. (Pet. Ex. 997, vol. 21, p. 156). Here, the minimum tariff is 75,000 barrels. As to this exhibit, Mr. Pilkington testified (vol. 20, p. 344) that, by the term "Eureka" oil

was meant the various kinds of Pennsylvania crude oil which came through the Eureka Pipe Line to Morgantown, being a mixture of oils of substantially one grade and one average gravity; also that, by "Morgantown", was meant Pennsylvania crude oil of a slightly lighter color, but substantially the same grade; also that, for the purposes of complying with the tariff requirements concerning amount of shipments, the pipe line companies rate Eureka and Morgantown crudes as the same grade, so that they may add together a certain amount of "Eureka", so-called, and a certain amount of "Morgantown", to make up the 75,000 barrels of the tender; it being all Pennsylvania high-grade crude oil.

In the light of the foregoing testimony, and regarding "Morgantown" and "Eureka" as the same kind of crude for purposes of shipment, it will be seen that Petitioner's Exhibit 997 (vol. 21, p. 156) shows nearly three hundred shipments between August 1st, 1905, and November 30th, 1908, of which all except fourteen were over 75,000 barrels. Some seven shipments prior to the filing of the tariffs, August 1st, 1906, five shipments subsequent to such filing, were slightly less than 75,000 barrels in amount. As to these shipments, Mr. Pilkington testified (vol. 20, p. 344) that the shortages were probably due to the fact that at Morgantown "they possibly had the 75,000 barrels in their tanks, but probably could not pump the tanks down to get out the total amount." Also, that, in the ordinary course of business, they could not "get out just the exact 75,000 barrels" but did so approximately.

The only shipment after the filing of the tariffs which was less than the minimum amount, excepting the few slightly less and already accounted for, was that of "Eureka 9901.14," on November 21st, 1907 (Pet. Ex. 997, vol. 21, p. 156 at p. 158). Mr. Pilkington explained (vol. 20, p. 345) that the sending of this small batch was due to an error in orders and that the batch was stopped when the error was discovered. He further added this testimony, which throws a side light upon the subject of contamination:

"Q. Do you know what became of that batch of oil? A. You will find that *the amount that went forward was totally mixed with some other oils.*

Q. You mean at the terminus no Eureka oil was found by the tests? A. No, sir. *We could not keep track of it; it was just mixed in with the other oils.*"

All the foregoing proof in regard to the practice of the pipe line companies, as respects the amounts of shipments required from Standard Oil shippers before and after the filing of the tariffs, is uncontradicted; most of it was produced in response to Government subpoena and put in evidence by the petitioner.

SIXTH. Contamination arising from moving batches of crude oil of different gravities or viscosities in the same pipe line is the principal cause necessitating large shipments.

I. Make-up and operation of a pipe line in actual practice.
1. *What a pipe line consists of.* Mr. Towl (vol. 17, pp. 3598-9) testifies as follows:

"Q. Will you describe in a general way what a pipe line is, taking some particular line which you have in mind, describing the number of pipes, the changes in the diameter of the pipes, the situation of tanks, etc.? A. In building a pipe line it is generally started from a field that has not reached its limit—its production is indefinite. It is generally started off with building a single line of pipe, which can be added to as the demands come on it or be taken up if found to be not needed. * * * The line starts in and goes uphill and downhill across the country, in all kinds of places. You first start out with an initial pumping station at the tankage farm; then, if they are going on a general uphill grade, they may start out with a small pipe—say a pipe six inches in diameter—and when they are going downhill they probably would use an 8-inch line. The lines would be changed in diameter as the local conditions required, until they reached the next station. The stations have to be located on a stream—some place where they can get water and where they can get fuel. Those are the two principal things that they must have to pump the oil. Sometimes the oil goes into a tank at the intermediate station, and sometimes it goes right into the pump and passes along. * * * The general way of increasing the line is to put in more pipes.

Q. Well, the fact is that as they are in operation today, they have, generally speaking, a number of parallel pipes in each section, do they not? A. There are only two or three small unimportant lines but what have that. Some have as high as seven pipes, six, five and so on.

Q. So you may start off with a section of five or seven pipes and then diminish to two or three pipes? A. Yes sir.

Q. And you increase again to a larger number, and so on? It goes forward irregularly, does it not? A. Yes sir; irregularly. * * * The parallel pipes are not always of the same calibre. It depends on when the change was made, what was the reason of it, how much capacity they wanted to increase it at a certain time. They might put a 6-inch (pipe) alongside of an 8-inch, or a 12-inch alongside of an 8.

Q. How frequent are the pumping stations? A. It depends on the local conditions of the country. Sometimes they may be less than twenty and sometimes they may be over fifty (miles). * * * Generally from 30 to 50 miles the stations will average, apart."

2. *Essentials in the operation of a pipe line.* Mr. Towl testified further (vol. 17, p. 3599) :

"Q. What is the great thing to be sought for in moving oil, in practical operation, in pipe lines, in regard to the rate that (at which) it goes through? A. You have to maintain a regular rate of flow through each station in your system. If you just had one pipe going through, one station would have a larger capacity than another, due to local conditions; and they are increased by the requisite amount of parallel line along until the capacity of the stations becomes the same.

Q. Generally speaking, you can only get oil through a pipe by pushing it with other oil behind it? A. Pushing it ahead with other oil. That is the only practical way of doing it."

Mr. Page (vol. 16, p. 2921) in reference to the same point testified that pipes going down a steep grade would empty more quickly than those on a level, so that when more capacity was needed, the custom was first to enlarge the capacity on a level, the result being that at different sections of the pipe line there would be very different numbers of pipes and a considerable difference in the calibre of the pipes used.

3. The complexity of the existing pipe lines, especially in respect to the diversity in number and calibres of pipes used in different sections of the pipe line system, is made entirely clear by the maps of defendants' pipe lines offered in evidence by petitioner, particularly Petitioner's Exhibits 990 and 991 (not printed in record), explained by Mr. Towl (vol. 20, pp. 310-32, 324).

II. General experience of experts as to contamination.

1. A mixture causing contamination results chiefly from differences in the gravity or viscosity of the two oils. Mr. Towl testified (vol. 17, p. 3600) that with "a high gravity oil and a low gravity oil or even when the oils are of the same gravity, there is a large mixture. Sometimes the question of viscosity has a great deal to do with the mixture. You may have two oils of the same gravity and one be much thicker than the other and there would be a very large mixture in a case like that."

2. Meaning of terms "gravity" and "viscosity" as applied to crude oil.

(a) Mr. Page (vol. 16, pp. 2939-40) testified that the term "gravity," as applied to oil, means its weight according to what is called the Beaumé scale, according to which the lighter the oil the higher its gravity, as compared with water, whose gravity is arbitrarily fixed at 10. This Beaumé gravity is not the same as "specific" gravity, but is the converse of it; so that oil of 44° gravity is much lighter in weight than oil of 33° gravity.

(b) The term "viscosity," as applied to oil, means the sticky quality of the oil; that is, its tendency to stick to the pipe and to stick to the other particles of oil (Martin, vol. 20, p. 294); for example, molasses is a highly viscous liquid.

3. The principal causes of contamination or mixture of oils in the pipe are (*a*) that the oil moves more slowly on the side of a single pipe than it does in the centre; and (*b*) that it moves at different rates of speed in parallel pipes of different calibres, and even of the same calibre (Towl, vol. 17, p. 3600).

(a) Different rates of flow in the same pipe.

This subject is treated exhaustively by Mr. Page (vol. 16, pp. 2929-51; Def. Ex. 227-240 not printed), who, by methods, the accuracy of which was not questioned by counsel for the

Government, demonstrated that the oil in the middle portions of pipe moves much faster than the oil near the inner surface of the pipe. As a result of the difference in velocity of the particles of oil at the centre as compared with that at the surface of the pipe, the tendency is for the oil behind, as it is pumped, to assume the form of an elongated cone or tongue, thrust into the body of the oil in front. As time goes on, this cone or tongue becomes more and more elongated, with the result that mixing in the pipe is produced, the oil in the middle going at a more rapid rate, and the oil on the edge of the pipe going more slowly and falling in behind. This movement is progressive and the tendency is to have more and more mixture as the oil proceeds further through the pipe (vol. 16, pp. 2949-50).

This difference in the velocity in the flow of oil in the same pipe is the same phenomenon which has been observed in regard to water and other fluids, and has been known for many years to hydraulic engineers (vol. 16, pp. 2924-5).

(b) *Mixture arising from different speeds in parallel pipes of the same or different calibres.*

Mr. Towl testifies substantially as follows (vol. 17, pp. 3600-01): Oil moves at different rates of speed in pipes of different calibres. Thus it moves 700 feet a mile faster through an 8 inch pipe than through a six inch pipe; that is, the oil in an 8 inch pipe would reach the end of the mile 700 feet ahead of the oil in the 6 inch pipe. This effect is cumulative. If oil were flowing simultaneously through three 8 inch and one 6 inch pipes parallel in a certain section of pipe line, and thus continued for 13 miles, the pipes then coming together, the head of the columns in the 8 inch pipes would, other things being equal, be thirteen times 700 feet ahead of the head of the column in the 6 inch pipe; that is, 9900 feet, or say $1\frac{3}{4}$ miles. In other words, when the oil in the 8 inch pipes had just reached the junction point, the head of the oil in the 6 inch pipe would be say $1\frac{3}{4}$ miles behind it. The 6 inch pipe for a length of $1\frac{3}{4}$ miles would hold 315 barrels, and the same length of three 8 inch pipes would hold 1742 barrels. If, to start with, all the pipes were filled with Mid-Continent oil of about the gravity of 33°, and Pennsylvania oil of an average gravity of 44° was pumped in behind the Mid-Continent oil in all the four pipes, then

when the head of the Pennsylvania oil in the three 8 inch pipes reached the junction point, the head of the Pennsylvania oil in the 6 inch pipe would be $1\frac{3}{4}$ miles behind, and that $1\frac{3}{4}$ miles of 6 inch pipe is necessarily still filled with Mid-Continent oil. This Mid-Continent oil proceeds to flow out at the junction point, while the Pennsylvania oil is flowing out from the three 8 inch pipes, and by the time that the Mid-Continent oil has entirely flowed out of the 6 inch pipe, 315 barrels of Mid-Continent oil would have mixed with some 1742 barrels of Pennsylvania oil. This is on the supposition that no local causes entered into the problem varying the rate of flow (Towl, vol. 17, pp. 3600-01).

It does not follow, however, that the flow would be as smooth and uniform as thus stated. Even if the pipes were of the same size, there might be a great difference. Paraffine forms on the inside of the pipes, and sometimes causes a very great difference in the flow through the pipe. Obstacles of different kinds get into the pipe and stop the flow. Where the lines are used in pumping paraffine oils, a scraper has to be run through the lines to remove the paraffine, and the amount of paraffine that is in the immediate vicinity of the scraper changes the flow through that line to a great extent. Sometimes the paraffine will collect enough to stop the flow entirely. There are other general causes making differences in friction, independent of the rate of flow between pipes of different calibre, and these other causes apply even to pipes of the same calibre. These causes of mixture increase in proportion to the length of the line through which the oil is pumped, or at least as far as such conditions continue (Towl, vol. 17, pp. 3601-02).

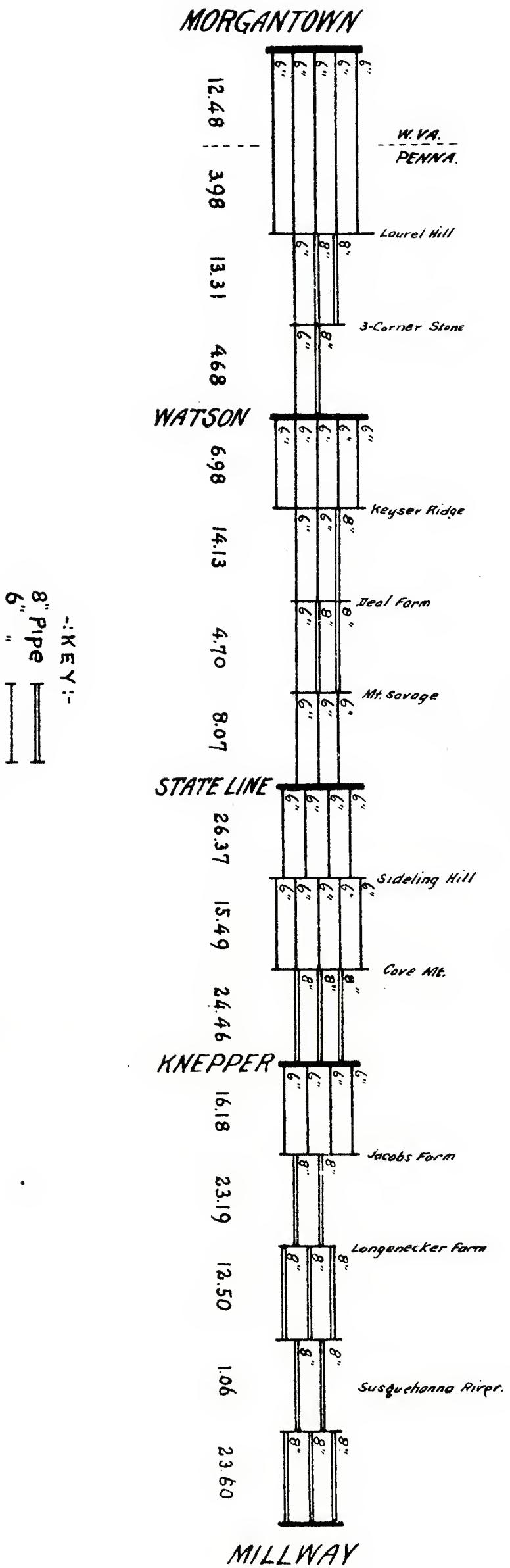
III. Practical tests over the Southern Pipe Line.

A series of tests on a large scale were made over the Southern Pipe Line from Morgantown, West Va. to Millway, Pa. in the autumn of 1907 and are fully explained by Mr. J. W. Vandergrift, Superintendent of the Southern Pipe Line Company, who had general charge of the tests (vol. 16, pp. 2977-2992). This testimony is quite uncontradicted and is corroborated by the testimony of Mr. Towl and by various exhibits.

1. The course of the pipe line of the Southern Pipe Line

Diagram of pipes from Morgantown to Millway
used in practical tests

September to November 1907.



Company is shown by red line on map, Defendants' Exhibit 251 (vol. 19, p. 614). Running for a short distance through West Virginia (where the line is owned by a West Virginia corporation, the Eureka Pipe Line Co.) and crossing the Pennsylvania State boundary, the line closely parallels that boundary for about half the distance to Millway and then turns north. This line was selected for the tests, not because it is more complicated than any other portion of the defendants' pipe lines, which is not the case; but because it happens to be a pipe line of moderate length, whose initial point, Morgantown, was a main shipping point under defendants' tariffs, and whose terminus is an important distributing point. Owing to the character of its initial and terminal points, the records concerning shipments over this line are comparatively complete and easy to check up, and the fact that there are no branches leaving the line and no points of delivery between Morgantown and Millway made the line on the whole less complicated and easier to handle. The section of pipe line from Mantua, Ohio, to Kane, Penn. (Map. Pet. Ex. 990, not printed) is considerably more involved in respect to diversity in the calibre of pipes than is the most complicated portion of the Southern Line. This fact is mentioned in order to disprove the charge made at various times by petitioner's counsel that the line selected for the experiment was the most complicated possible.

2. The pipes actually used in these tests formed only a portion of the line from Morgantown to Millway, the balance of the system being used at the time for moving Pennsylvania grade oil alone, so as to diminish the amount of mixture (Vandergrift, vol. 16, pp. 2977-9). The pipes used are shown separately on the accompanying diagram. They are described by Mr. Vandergrift as follows, the accurate distances being here taken from the map (Pet. Ex. 990 not printed), Mr. Vandergrift having given the distances only approximately. From Morgantown for a distance of 16.42 miles there are five 6 inch lines, which then change to a combination of two 8 inch and one 6 inch line for 13.31 miles. Again, there is a change to the combination of the one 8 inch and one 6 inch for a distance of 4.68 miles; thence to five 6 inch lines for 6.98 miles; then for 14.13 miles to one 8 inch and two 6 inch lines; then for 4.70 miles to two 8 inch and

one 6 inch ; then to three 6 inch, four 6 inch, five 6 inch, three 8 inch, four 6 inch, two 8 inch, three 8 inch, two 8 inch and three 8 inch for various distances, ending at Millway. The most complicated part of the line is between Morgantown and State Line, a distance of about 70 miles. Examining the accompanying diagram of the line used in the practical tests in question, and, bearing in mind the explanation of Mr. Towl (*ante*, p. 197) it will be apparent that at each point where the calibres of the pipes changed, there is an additional opportunity for mixture ; thus when the five 6 inch lines changed to two 8 inch and one 6 inch ; also when these change to one 8 inch and one 6 inch ; also when these change to five 6's, and when they change to one 8 inch and two 6 inch, etc.

At each junction point indicated on the diagram, where such changes took place, there will inevitably be a large mingling of oils, due to the difference in the rate of speed in pipes of different calibres, as explained by Mr. Towl and other witnesses. Even in the later portion of the distance to Millway, where the lines run in groups of like calibres, still there are liable to be differences in rates of flow due to paraffine, stoppage of scrapers and other causes, as mentioned by Mr. Towl (*ante*, p. 198) and such differences in rates of flow would, of course, increase the amount of mixture of oils of different gravities. There is also to be considered the mixture resulting from the different rates of flow of oil in the same pipe, due to the greater velocity of the particles near the centre of the pipe, as compared with those near the surface.

In moving different kinds of crude oil through the same pipes, what are known as scrapers, or separators, are sometimes used, though it would appear that they are ineffective to prevent mixture. In three of the five tests, testified to by Mr. Vandergrift, scrapers were used and in two of them they were not used, so that the tests fairly cover all methods in use. More than usual care to guard against error was employed in conducting these tests (Vandergrift, vol. 16, pp. 2981-2).

3. Six different grades of oil, which differ widely in their gravity, and to some extent in their viscosity, are regularly pumped through the Southern Pipe Line. They are Pennsylvania, Kansas, Illinois, Cabell, Somerset and Corning. All of these grades or kinds of oil, the pipe line companies keep distinct as far as possible (Vandergrift, vol. 16, pp. 2979). In the

case of each of the tests, Pennsylvania grade oil of an average gravity of about 44° Beaumé was preceded and followed by Western oil ; that is, either Kansas or Illinois crude, of a gravity approximating 33° . The gravities were tested at the starting and terminal points and at various intermediate points. There would obviously be a mixture both at the front and at the rear ends of the column of Pennsylvania high grade crude, and the figures given by Mr. Vandergrift represent the sum of the losses of Pennsylvania grade oil into the lower grade oil at the front and rear ends. The problem, as usual, was to move high gravity oil, which is the more valuable, so as to lose as little of it by mixture with a lower gravity oil, which is less valuable. Obviously the lines at first would be full of the low gravity Western oil. Behind this would be pumped in Pennsylvania grade oil, which would push forward the Western oil. Mixture would then result from the causes already described, so that more and more of the Pennsylvania grade would become mingled with the lower gravity oil, and lost for the uses for which high grade oil is especially adapted.

The passage of crude oil through a distance of 210 miles, which is the distance from Morgantown to Millway, is a matter of four or five days. As the time approached when the head of the Pennsylvania oil might reasonably be expected to arrive at Millway, tests of the gravities were taken frequently. Obviously, as the low gravity oil came first, the gravities would show about 33° until the batch of mixed oil began to arrive, then the gravities would gradually rise as more and more of the higher grade was mingled with the lower grade. As shown by Mr. Vandergrift's testimony, the oil as received at Millway was allowed to flow into tanks holding Western oil until the gravity had risen to within about $1\frac{1}{2}$ degrees of the average gravity of the batch of Pennsylvania oil, or say, 42.6° , when the column of oil was turned into other tanks. When most of the Pennsylvania grade had been received at Millway, the tests would begin to show lower gravities. Here again, the line of demarcation, or "cut" as it is called, was not the maximum gravity of the high-grade oil, but was about $1\frac{1}{2}^{\circ}$ lower. In other words, everything above about 42.6° was counted as being of the theoretical initial gravity of the high-grade oil and was turned into the high-grade tank. Everything of lower gravity below the "cutting" point was

turned into the tank of Western oil. The amount of high-grade Pennsylvania oil of given average gravity which entered the system at the initial point being definitely known, and the amount received at Millway of the 42.6° gravity or better being measured, it is apparent that the difference between the two amounts would show how much high-grade oil had become mingled with the lower grade oil in transit. The amount thus mingled showed a loss in value represented by the difference in the market price of the high-grade and the low-grade oils. This is approximately the difference between \$2.18 and \$1.35, or 83c. a barrel of 42 gallons, which Mr. Tarbell, of the Pure Oil Co., testified were the cost of the two kinds of crude laid down at his refinery. (vol. 20, p. 303).

4. We take up now in detail the five tests conducted by Mr. Vandergrift over the Southern Pipe Line.

(a) Test of September 13, 1907: The batch of Pennsylvania oil consisted of 155,605 barrels of an average gravity of 44.3° (Vandergrift, vol. 16, p. 2979) preceded and followed by Western oil of gravity 32 to 33° (*id.*, vol. 16, p. 2983). No separator was used. Mr. Vandergrift's testimony on this test is as follows (vol. 16, p. 2983):

"Q. When did the men at Millway at the end of the line turn the stream into the tank or tanks assigned to the high gravity oil—at what point of gravity, I mean?

A. *When it got up or down to 42.6, as the case might be.*

Q. That is to say, the average gravity of the batch being 44.3— A. 44.3 Beaumé; yes, sir.

Q. When in the course of their tests of gravity the gravity had risen from 32 to 33 until it showed gravity 42.6, they turned that into the— A. Higher-gravity oil; yes, sir.

Q. Into the higher gravity oil tanks? A. Yes, sir.

Q. And then they allowed it to continue running into those tanks until the gravity fell off to what point? A. 42.6.

Q. Then, in this amount of 139,857 barrels, then is included all of that batch which showed 42.6 or better, is it? A. Yes.

Q. And under those conditions all that came out at the end of the line as of 42.6 or better was 139,857 barrels? A. Yes, sir.

Q. Showing a shortage, according to these figures, of 15,748 barrels? A. Yes, sir.

In other words, there was on this test an absolute loss, so far as high grade oil was concerned, of 15,748 barrels.

(b) Test of September 28, 1907. In this test were shipped 79,698 barrels of Pennsylvania grade oil of an average gravity of 44.3° Beaumé (*id.*, vol. 16, p. 2980) preceded and followed by Western oil of gravity about 32 or 33° (*id.*, vol. 16, p. 2984). The "cut" was made at 42.6°; that is to say, all oil showing gravity from 42.6 up was allowed as being high gravity oil and taken into the Pennsylvania grade tanks (*id.* vol. 16, p. 2984). On this test there was received at Millway crude oil of gravity 42.6° or better, only 62,654 barrels, showing a loss of 17,044 barrels by mixture with the Western oil. In this test scrapers were used. These were of different sizes, to accommodate the 8 inch pipes and 6 inch pipes (*id.* vol. 16, p. 2981). One of the scrapers stuck fast in this test (*id.* vol. 16, p. 2981). At State Line Station the oil came in through three 6 inch pipes, which pipes were numbered 2, 3 and 4 (*id.* vol. 16, p. 2985). At 5.30 A. M. on September 30, 1907, the gravity readings on the three lines at State Line Station were as follows : No. 2, 36.6; No. 3, 43.6; No. 4, 42.2. In other words, the high grade oil in the line No. 2 was far behind the other two lines. This indicated that a part of pipe No. 2 was still filled with oil of low gravity, showing that for some reason the oil in that pipe was traveling much more slowly than in the other pipes, notwithstanding that they had the same calibre. The oil in pipe No. 2 was six hours later in coming up to the gravity of 43.5 than it was in pipes Nos. 3 and 4. That is to say at 6.30 A. M. pipes 3 and 4 showed a gravity of 44°, and it was not until 11:15 A. M. that the oil in No. 2 line reached the neighborhood of 44° (*id.* vol. 16, p. 2986). All of the oil from these three pipes came together at State Line, so that for about five hours, oil of lower gravity from pipe No. 2 was mingling with oil of higher gravity from the other two pipes. Mr. Vandergrift accounted for this circumstance by the delay in the separator (*id.* vol. 16, p. 2987).

Similarly, at Knepper Station, the oil in one pipe was seven hours later than that in the other pipes, resulting in a further large amount of mixture (Vandergrift, vol. 16, p. 2988).

He further testified that, even when a scraper was not used, the same thing sometimes occurred on account of paraffine de-

posits in the pipes, which are thicker in some pipes than in others. In both the instances mentioned at State Line and Knepper, the oil as it emerged from the three pipes all went into a common junction, where there was free inter-communication between the three streams (*id.*, vol. 16, p. 2989). The scraper in this case got to Knepper forty hours later than the scrapers in other pipes. There was a similar delay as to one of the scrapers coming into Millway (*id.*, 2989-90).

(c) Test of October 20, 1907. No separators were used, though every possible care was taken to guard against mixture. In this test 140,222 barrels of Pennsylvania grade oil of gravity 43.4° Beaumé were shipped at Morgantown, preceded and followed by Western oil of 32° to 33° gravity and only 123,350 barrels were received at Millway of gravity better than 42°, at which point the "cut" was made. There was thus a loss of 16,872 barrels of the high grade oil (*id.*, vol. 16, pp. 2981-4).

(d) Test of November 6, 1907. Separators were used. In this test 131,024 barrels of an average gravity of 44° Beaumé were started at Morgantown and only 113,871 barrels of 42.5° or better were received at Millway, showing an absolute loss, so far as the high-grade oil is concerned, of 17,153 barrels (*id.*, 2981-4). The high-grade oil was preceded and followed by western oil of 32 to 33° gravity (*id.*, p. 2984).

(e) Test of October 10, 1907. The high grade shipment consisted of 85,086 barrels of an average gravity of 44.3°, preceded by Somerset of 33° to 36.4°, and followed by Western oil of gravity of about 33°. Scrapers were used. All crude showing above 42.5° was turned into high gravity tanks at Millway. There was received at Millway, of gravity 42.5°, or better, only 76,974 barrels, showing an absolute loss, so far as high grade oil is concerned, of 8,112 barrels.

(f) It is obvious that, in estimating the amount of contamination for loss of high grade into lower grade oil for the purpose of determining the minimum shipment, it would be necessary for engineers to take only the maximum amount of loss caused by mixture, since a tariff requirement would be fixed for an indefinite amount of business, and both carrier and shippers should be protected by a safe margin. The very greatest concession that could safely be made would be to take the average of the five tests, or say 15,000 barrels of loss. Taking Mr. Tarbell's figures for the difference in the value of the Pennsylvania and

Western crudes at his refinery, to wit 83c. per barrel, this loss of 15,000 barrels represents a loss in money value on a single shipment of Pennsylvania grade oil of \$12,450. The minimum shipment over the Southern Pipe Line required by the tariff being 75,000 barrels, it appears that the average amount of loss was at least one-fifth of this minimum, which sufficiently demonstrates that the minimum shipments fixed by Mr. Towl and his associates for the tariffs were as low as safety would permit. If less than 75,000 barrels were accepted at Morgantown, the loss would be substantially the same and would amount to an utterly prohibitive percentage.

Should it be claimed that the deficiency caused by the lost high grade oil could be supplied from the mass of mixed oil by having that turned into a third receptable, the burden of proof is on the petitioner to show that the oil in said mixture would be any better for practical refining purposes than pure, low grade, Western oil. In any event, all the oil which poured into the third receptacle would become uniformly mixed so as to reduce the gravity of the mixture by 5 or 6 degrees below that of the Pennsylvania grade. It is certain that the market value of such mixture would be very much less than that of Pennsylvania grade, and probably little, if any, greater than that of straight Western crude, so that the loss would not be materially decreased.

5. Attempts were made by petitioner's counsel to show that there was no proof as to the degree of mixture of oil below the "cutting point" in the various tests and the very violent assumption was made that most of the mixed oil might be of a gravity but slightly below the cutting point. A close examination of Mr. Vandergrift's testimony shows the contrary. He testified (vol. 16, p. 2980) :

"When the oil was received at Millway, a corresponding test was taken, and *when the gravity reached a certain point* it was turned into separate tanks, and that which fell below that was turned into other tanks."

Also (page 2983), as to the test of September 13, 1907, he testified that the men at Millway turned the stream into high gravity tanks "*when it got up or down to 42.6, as the case might be.*"

Again (*Id.*, vol. 16, p. 2983) he testifies :

"Q. When in the course of their tests of gravity *the gravity had risen from 32 or 33 until it showed gravity 42.6*, they turned that into the— A. Higher gravity oil; Yes, sir.

Q. Into the higher gravity oil tanks? A. Yes, sir.

Q. And then they allowed it to continue running into those tanks until the gravity fell off to what point? A. 42.6."

Again (*Id.*, vol. 16, p. 3006) he testified :

Q. What was the grade of the 15,748 that you call contaminated? A. That was all below 42.6.

Q. How do you know? Did you test it all? A. *We tested it as it came in*, and none of it came above that, and of course we turned it in.

Q. You made one test? A. *We made a series of tests.*

Q. What was the grade of that oil, the 15,748? A. Of a gravity less than 42.6.

Q. Haven't you got a record to show just what the gravity of that was? A. *From that on it fell down to the western oil gravity of 33.*"

Again (*Id.*, p. 3010) he testified :

"As the oil came in we turned all that was above 42.6 and so on into the good oil, and that that was below we turned into the bad."

This testimony, and what has previously been quoted from Mr. Vandergrift, shows sufficiently for any candid mind that the degree of mixture was substantially progressive. What happened was that the operative who was registering the gravities of the oil, as it came in from Millway, observed the first change from the normal gravity of the low grade oil to a slightly higher gravity, and then making gravity tests frequently, he observed that the gravities rose steadily until they reached the point determined on for cutting the stream, when the oil was turned into the high grade tank. He continued observing the gravities until, after a long time, these would begin to fall off, when he followed them down until the gravity reached the cutting point, where he would turn the stream again into

the low gravity tank. This fairly describes the process which the testimony of Vandergrift shows to have taken place, and it is inconsistent with any other theory than that the degree of mixture or contamination was a progressive one, and that the high grade oil which was lost was mingled in a substantially homogeneous way through all the mass of mixture which intervened between 33° gravity and 42.6° gravity on the way up, and between 42.6° and 33° on the way down.

IV. Corroboration by records of results of practical tests.

The practical tests above described are strikingly and amply corroborated by records placed in evidence in connection with the testimony of Mr. William W. Pilkington, Traffic Manager of the pipe line companies, who was called by the Government as its own witness and who produced these records in response to a Government subpoena. Among other records, he produced a list of shipments of Pennsylvania grade oils pumped from Morgantown by way of Millway to Centerbridge from September 13th, 1907, to December 1st, 1908. This list was in the hands of Government counsel for several days, at the end of which time they declined to put it in evidence, and it was then offered in evidence by the defendants without objection. (Defts'. Ex. 397, vol. 19, p. 896). In this exhibit, the terms "Eureka" and "Morgantown" represent different varieties of Pennsylvania grade oil, as in Petitioner's Exhibits 997, 998, (vol. 21, pp. 156-162) already discussed. Mr. Pilkington explained that the phrase "Kansas as Eureka", and similar phrases occurring at frequent intervals in this Defendants' Exhibit 397, indicated that there was a shortage in the "Eureka" high-grade oil when the batch reached Centerbridge, and that the pipe line company delivered to the consignee, which was the Standard Oil Company (New Jersey), an amount of Kansas or other low-grade oil equal to the amount of the deficiency, thus throwing the loss upon the consignee (Pilkington, vol. 20, p. 347). Taking the first item in Defendants' Exhibit 397 (vol. 19, p. 896) he makes the following explanation in substance :

From September 13th to September 20th, 1907, a batch of 120,604.19 barrels of Pennsylvania grade oil was started from Morgantown. This amount was charged to the Southern line and was pumped through the Southern line, relayed at Millway and pumped on to Centerbridge, and the amount of

Eureka oil shown in the right-hand column was delivered at Centerbridge. Only 102,318.08 barrels of Pennsylvania or Eureka oil reached Centerbridge, and were there delivered to the consignee, the Standard Oil Company (New Jersey). This indicated a deficiency of 16,688.91 barrels of high-grade oil lost into the low-grade oil in transit from Morgantown. To make up the deficiency, a like amount of Kansas oil was delivered to the consignee, who was obliged to accept it and to stand the loss. The difference between the totals, amounting to about 1,600 barrels, is due to shrinkage, leakage, etc., and has nothing to do with the question of mixture or contamination (Pilkington, vol. 20, pp. 347-8). These figures show that, in this particular transaction, over 16,000 barrels of Eureka or Pennsylvania high-grade oil had disappeared in transit; that is, it had become mingled with the oil which preceded it and followed it, and to all intents and purposes had been converted into Kansas oil, which, as already shown, was worth at the refinery some 83 cents per barrel less than the Eureka or Pennsylvania grade oil. This would make a loss on the transaction of approximately \$13,280.

On the point of mixture, in reference to the first shipment shown on Defendants' Exhibit 397, just discussed, Mr. Pilkington (vol. 20, pp. 354-5) testified that the 16,688.91 barrels got mixed with the lower grade oil on the way through from Morgantown; "*it got mixed in the line. * * ** That batch was that much short when it was delivered from Centerbridge from the high-grade tanks. ** * * It was mixed in the lines between Morgantown and Centerbridge.*"

Mr. Pilkington then explained quite fully (vol. 20, pp. 348-9, 353-356), the other shipments shown in Defendants' Exhibit 397 in substantially the same manner. In some instances, as in item 27 and 28, the entire loss is charged under the second item, which shows an aggregate loss of 26,542.80 barrels, which really covered the two items, 27 and 28. (Pilkington, vol. 20, p. 349; Defts'. Ex. 397, vol. 19, p. 896D). Running down this exhibit, the following amounts of high-grade oil lost in transit on the various shipments appear:

Shipment No.	Loss in Barrels.	Shipment No.	Loss in Barrels.
1..	16,688.91	17..	7,388.44
2.....	19,390.35	18.....	11,148.90
3.....	18,527.97	19.....	9,254.37
4	17,332.30	21..... . . .	15,179.95
5..... . . .	16,202.58	22	9,509.50
6..... . . .	14,947.66	24..... . . .	12,067.60
7	18,152.34	25..... . . .	18,798.50
8..... . . .	12,666.57	26..... . . .	6,705.55
10-11..... . .	14,330.47	27-28	26,542.80
12..... . . .	11,822.01	29..... . . .	8,010.12
13..... . . .	15,871.89	30	10,014.87
14..... . . .	9,554.34	31..... . . .	8,890.72
15..... . . .	15,421.83	32	12,611.07
16..... . . .	10,624.65		
			362,156.26

Here are the results of 30 shipments, showing losses ranging from 6,705.55 to 19,390.35 barrels, and averaging for the entire number 12,071.87 barrels, of high-grade oil lost in transit by mixture with low-grade oils. These are records of operation in the ordinary course of business, covering a period of little more than a year, produced in response to the Government's subpœna by a witness for whose credibility counsel for the Government vouched by placing him upon the stand, and who testified that they were correct according to the records in his office. They fully corroborate the results of Vandergrift's practical tests, and are final proof, if any were needed, of the verity and great extent of the contamination testified to by various witnesses and of the necessity for the large amounts of the minimum shipments required by the tariffs.

Certain of the shipments shown in Defendants' Exhibit 397, where the loss is much less than in the cases included in the foregoing table, were explained by Mr. Pilkington as having been carried through the smaller portion of the system between Morgantown and Millway, where the conditions are better and the amount of contamination likely to arise was much less; that portion of the system being reserved almost entirely for the Pennsylvania grade oils.

A similar statement of deliveries to Philadelphia from Millway was produced by Mr. Pilkington, who was examined concerning the same. This statement showed similar results in respect to losses of high-grade oil, but amounts smaller than those appearing in Defendants' Exhibit 397. Mr. Pilkington

explained this partly by the fact that the records represented only partial shipments, some portion of the batches having been diverted to Centerbridge, and also by the fact that, in some instances, the record was of losses only from Millway to Philadelphia. Nothing in this statement in any way tended to contradict the overpowering effect of Defendants' Exhibit 397.

V. The depositions of Messrs. Page, Weymouth and Schoder (vol. 16, pp. 2920-2976 and pp. 3024-3052) describe very fully certain scientific tests designed to show the different velocities of oil at different points in the interior of a pipe and the mixture resulting therefrom and the tendency of this mixture to increase progressively in relation to the length of the pipe. The validity of these tests was substantially conceded by counsel for the petitioner and the results were in no way shaken by cross examination. In view, however, of the results of the practical tests and of the exhibits in the record introduced by Mr. Pilkington, it is not deemed necessary here to go into said scientific tests at any greater length. It should be noted that these scientific tests were made through a single small pipe and over very short distances, either 16 or 24 miles. It was not to be expected that a very large amount of mixture would appear under those conditions. All that could be expected from a test on so small a scale was to evolve the law and show the tendency of the mixing action, and these are thoroughly established by the tests.

SEVENTH. The use of pipe lines for common carrier purposes is commercially impracticable, because of the losses arising from contamination.

I. As already stated, Mr. Tarbell (vol. 20, p. 303) testified that Pennsylvania crude cost his company at the refinery \$2.18 for a 42 gallon barrel, as against \$1.35 for Oklahoma crude, which is the same crude referred to by Vandergrift and Pilkington as Kansas crude. The difference in the two is 83 cents per barrel of 42 gallons. It is believed that this loss is prohibitive. No shipper who did not own all the oil which was passing through the lines would submit to so great a loss.

II. The fact that various kinds of crude have been carried for Standard Oil shippers with the large resulting losses shown is immaterial because of the unified ownership of all the Standard Oil properties, whereby all the crude carried, whether benefited or injured in transportation, is owned by the same interests. Hence, the loss sustained is merely a necessary incident of a single great business.

III. Presumably independent shippers neither would nor could stand the loss resulting from the transportation of their high-grade oil with the low-grade oil of other shippers.

1. The point will be best made clear by an illustration. Suppose an independent shipper should bring 75,000 barrels of high-grade Pennsylvania oil of 44° gravity to Morgantown and tender the same to be transported through the Southern Pipe Line to Millway or Centerbridge. At the moment of this tender, a batch of Western crude of 33° gravity belonging to another shipper is being pumped through the lines. The Pennsylvania grade crude of the independent shipper is pumped into the lines behind the Western oil, and, later is followed by another batch of Western or other low gravity crude belonging to a third shipper. At Millway or Centerbridge, the first named shipper receives not exceeding 60,000 barrels of high gravity oil and 15,000 barrels or over of Western crude, worth to him, either to refine or to sell, at least 83 cents per barrel less than the oil which he delivered at Morgantown, or say, \$12,350. Meanwhile, his lost 15,000 barrels of high-grade oil has gone to enrich the oil of the first and third shippers, but there is no way in which that oil can be traced or recovered. Nor could the carrier justly be held liable for any such loss. So that the independent shipper of the Pennsylvania grade oil would have to pocket the entire loss. It is obvious that such a loss would be ruinous on a large transaction.

2. But on a small transaction, it would be proportionately as great. In the instance suggested by counsel for petitioner in cross examining Mr. Towl (vol. 17, pp. 3617-18) where it was assumed that the independent offered 5,200 barrels of high-grade oil to be transported with 70,000 barrels of high-grade oil belonging to a Standard Oil shipper, with the understanding that the independent should take his percentage of

the mixture at the end, the conditions are the same on a small scale. That is to say, the batch of 75,000 barrels, composed partly of 70,000 barrels of Mr. Trainor's oil and 5,000 barrels of the independent shipper's, being preceded and followed as before by low-grade oil belonging to other shippers, would be liable to lose 15,000 barrels, and would certainly lose a very large amount, in passing from Morgantown to Millway or Centerbridge. If the loss were 15,000 barrels on the whole batch, then the independent would lose 1,000 barrels out of his 5,000, and must take 1,000 barrels of low-grade oil in its place. This exchange would cost him, at the price mentioned, 83 cents per barrel, or say \$830. In other words, on a transaction involving the moving of oil worth \$10,900, there would be a loss of \$830, irrespective of the cost of transportation. Commercially, such a loss would be prohibitive.

3. A number of producers from the Midcontinent field testified to their belief that it was impossible to make pipe lines common carriers to a commercial extent, where oils of different gravities were to be transported; their reason being substantially that already given that the resulting mixture in the pipes would be to the damage of the shipper sending the higher-grade of oil (Barnes, vol. 16, pp. 2730-2734; 2735; 2736; 2742; Geiser, vol. 16, p. 2848).

IV. The difficulties arising from contamination and the great losses resulting therefrom in a system of the size and complexity of the lines of the Standard Oil companies cannot be remedied by the division of the lines.

1. In regard to the partial divisions already existing in some of the pipe lines, the testimony is uniform that they are not permanent, and that, even where some division continues, the number of pipes in the sub-systems varies. Mr. Pilkington (vol. 20, pp. 338-9) testified, referring to the line from Preble to Adgate, that, while some pipes were used continuously for a certain period for pumping Illinois oil, they were not necessarily the same pipes and not the same number of pipes. Also, that the same was true of the Kansas oil. Again, he testified (vol. 20, p. 341), when examined by Mr. Kellogg:

"Q. Then you do, in the transportation of Lima oil to the seaboard, do both ways; you run Lima-Indiana

oil and follow it with other oil, and you run it into separate pipe lines? A. We run one grade in all lines, at times.

Q. *In other words, you do it all ways?* A. *All ways.*

Q. That is, you follow one batch with another, and then you divide the lines into separate systems and use one for one kind and another for another? A. *As the conditions require, yes, sir."*

Again, to the same effect (vol. 20, pp. 342-3) he testified that, at the present time, three pipes were being used for Western oil and one for Lima oil from Western points to Unionville, and that, some time ago, two of the pipes were used on Lima oil and two on Western oil.

2. Any attempt at such division would result in a great loss of capacity. Mr. Towl testified (vol. 20, p. 319) that, to divide the system from Cygnet, Ohio, to Unionville, New York, into three groups of pipes or three separate sub-systems, so that they could be operated separately, would cause a loss of capacity of at least 5,000 barrels a day. That is, that 5,000 barrels less per day of crude oil could be delivered to the Standard Oil Company (New Jersey) at Unionville. How serious a reduction this would be, can be seen by referring to Defendant's Exhibit 269, showing the capacity of the refineries in 1906. Allowing three hundred days to the year, the capacity of the Long Island refineries is 6,500 barrels per day; of the Pratt Works, Brooklyn, is about 5,263 barrels per day; of the Sone & Fleming works is about 5,633 barrels per day. *So that a loss of 5,000 barrels of capacity at Unionville would mean substantially the loss of the daily capacity of one of the smaller refineries, or would in effect involve the closing of the refinery.* In addition to the loss of 5,000 barrels a day of capacity, there would be a further very large loss resulting from the fact that, if the three sub-systems were permanently divided, one or more of them would be idle part of the time, because the supply of different kinds of crude comes in an irregular manner. So that, *assuming the subdivision into three sub-systems, there would not always be enough of each of the three different kinds of crude to occupy a sub-system constantly.* So that, *if they were debarred from shifting different kinds of crude to different pipes, there would be times when one or the*

other of the sub-systems would be idle; which would mean, as long as it lasted, that there would be a subtraction of approximately one-third of the entire system (Towl, vol. 20, pp. 320, 321).

Mr. Towl also testified that, to divide the Southern Pipe Line system from Morgantown to Millway into three sub-systems, if it were physically possible, would result in a loss of daily capacity, as compared with two systems, of four thousand barrels a day (vol. 20, p. 323).

3. Nor could the loss of capacity resulting from permanent subdivisions of the lines be remedied by additional construction, except at great cost. Mr. Towl (vol. 20, p. 320) testified that new construction from Cygnet to Unionville, which would replace the capacity lost by a subdivision into three sub-systems, would cost from two to three million dollars; and that to provide new construction over the Southern Pipe Line to make up for the loss of 4,000 barrels a day capacity resulting from a division into three sub-systems, would cost about two million and a half dollars (vol. 20, p. 330).

Mr. Towl explained, as one element in the great cost of such new construction, the equipping of pumping stations with new pumps and machinery. Every new pipe requires a new pump, and each pump, with the necessary connections at a single pumping station costs from \$25,000 to \$30,000, in addition to which an additional tank would cost \$10,000 (vol. 20, p. 319). The record shows that these pumping stations occur at intervals of thirty to fifty miles throughout the entire length of the trunk line (Towl, vol. 17, p. 3599).

4. It needs no argument to show that no common carrier is under the duty to undertake new construction at such a vast cost. To ask such a thing of a pipe line company would be tantamount to requiring a railroad company operating a single track road to double-track its road, contrary to its own judgment as to the revenue to be derived from the proposed outlay.

5. It must be apparent from the foregoing discussion that the operation of trunk lines of the extent and complexity of those here considered, as common carrier lines, is commercially impracticable under the existing conditions and in view of the difference in chemical qualities and market value of the various crudes to be transported.

EIGHTH : Testimony in rebuttal.

The petitioner called in rebuttal Messrs. Towl and Pilkington of the defendant companies, whose testimony has already been considered, and also the following: James B. Martin, Superintendent, and W. W. Tarbell, Treasurer and General Manager, of the United States Pipe Line, and C. C. Blackman, Supt. of the Port Arthur Refinery.

I. Mr. Martin and Mr. Tarbell testified concerning transportation over the same pipe line. The following facts appear from their testimony.

1. The United States Pipe Line has two lines, consisting of a single pipe each, extending a distance of 382 miles; one line used for transporting refined oil is 5 inches in diameter, the other used for transporting crude oil is 4 inches in diameter through most of its length (Martin, vol. 20, pp. 285 and 294). Through the refined pipe line, two kinds of refined oil are carried, one known as Water White and the other as export oil. The difference in the gravity of these two oils is very slight, and hardly appreciable, and neither of them has any viscosity. In other words, there is no tendency of the refined oil passing through the pipe to stick to the side of the pipe. It practically runs through like water, leaving the interior of the pipe always clean, and there is no difference in this respect between Water White and export oil (Martin, vol. 20, pp. 286, 294). It is significant that the Water White oil is forwarded through the refined oil pipe in batches of 30,000 to 40,000 barrels and seldom less (Tarbell, vol. 20, p. 300). Mr. Tarbell refused to say to what extent the Water White and export grades of oil mixed in passing through the line. His Company reserves the right to charge refiners for any deterioration. He would not say that there had not been any deterioration, but simply that his Company had not made a charge for such.

Through the crude pipe line the company transports two kinds of Pennsylvania grade crude, which are classed in the market as the same grade of oil, and have the same market value, but differ by 3 degrees in gravity; also the viscosity of the two kinds transported is the same; that is, whatever tendency there may be in either of them to stick to

the side of the pipe or the particles of oil to stick to each other would be just the same in one as in the other (Martin, vol. 20, p. 295). Most of the crude oil carried through this line is for one owner, the Pure Oil Company. Out of 60,000 barrels a month, at least 55,000 are for that company, and 5,000 barrels are carried for the Columbia Pipe Line, which is the only other owner, except the Pure Oil Co., for which the company carries crude (Martin, vol. 20, pp. 296-7). The line is pumping Pennsylvania grade oil of 44.5° most of the time, but once a month forwards 5,000 barrels of gravity 41.5° for the Columbia Pipe Line Co. Mr. Tarbell added to the above that occasionally a batch of Pennsylvania grade oil from the Bradford field, having a gravity of about 41.5°, or about the same as that forwarded for the Columbia Pipe Line Co., was occasionally sent through the line in batches of from 5,000 to 8,000 barrels.

2. It must be apparent that the testimony of Messrs. Martin and Tarbell furnishes no argument in support of the general proposition that pipe lines should be common carriers.

(a) As to their refined oil pipe, none of the elements are present testified to by witnesses who discussed the subject of contamination. That is, refined oil has no viscosity, the two kinds of refined have practically the same gravity, and the oil, as Mr. Martin said, runs through the pipe like water. Moreover, the fact that there is but a single pipe eliminates the most serious cause of contamination, namely, that arising from transporting oil through parallel pipes in which the oil moves at different rates of speed and mixes at the junction points.

(b) Nor does the testimony of Messrs. Martin and Tarbell as to crude transportation by their Company affect the situation in the least. Counsel for the Government ingeniously tried to have it appear that the United States Pipe Line Co. was transporting different *grades* of crude. Such is not the case. As Mr. Martin testified, they were simply transporting two or three kinds of Pennsylvania oil, both of which are included generally in what is known as "Pennsylvania grade," and are not classed in the market as different kinds of oil. They have the same market value and are practically the same grade of oil, with the same viscosity, and but a slight difference in gravity (Martin, vol. 20, p. 295). In other words, there are only such

differences in the different crudes so transported as exist between different kinds of Pennsylvania grade crude transported by the defendants without any separation, and as to which the contamination is disregarded (See testimony of Pilkington, Vandergrift and Towl).

(c) The problem presented to the defendant pipe line companies is to transport a number of widely different crudes from different fields, of different chemical properties, and of altogether different market values. Vandergrift distinguishes six different kinds of such crudes, to wit, Pennsylvania, Kansas, Illinois, Cabell, Somerset and Corning, all of which have different chemical properties, widely different gravities, different viscosities, and, what is most important, different prices in the market. For example, there is a difference of 11° in the gravities of the average Pennsylvania grade, which is about 44° , and of Kansas or Illinois crude, which is about 33° ; so also the chemical properties of the two crudes are widely different, and the market value is so far different that, according to Mr. Tarbell, the Government's witness just quoted, the Pennsylvania crude costs him at his refinery \$2.18 per barrel and the Kansas or Oklahoma crude only \$1.35 per barrel. (Tarbell, vol. 20, p. 303.) Moreover, the crudes are used for different purposes. Mr. Tarbell testified (vol. 20, p. 303) that his company required Pennsylvania crude for making the better grades of lubricating oil, and that these were among the most valuable products he turned out, and that it would be hard to be in the general oil business without them.

3. Mr. Towl, called by the Government as its own witness on rebuttal, testified (vol. 20, pp. 325-6) that the transportation of refined oil through such a pipe as was described by Messrs. Martin and Tarbell, under the conditions to which they testified, did not in any sense present the same problem as is presented in the transportation of crude oil, because the two kinds of refined oil had very nearly the same gravity and practically no viscosity; that viscosity makes the oil stick and mix more and is one of the serious elements conduced to the mixture of crude oil; also, that to transport through a single pipe two kinds of Pennsylvania crude, differing only three degrees in gravity and of the same viscosity does not present the same problem which is daily presented to the Standard Oil pipe

line operators, in transporting various crudes through their complex system, nor does it throw any light upon the question at all. The problems are in no way comparable; also that under the circumstances testified to by Messrs. Martin and Towl in regard to their crude pipe line, he would not expect very much mixture, except such as might be the result of accident (Towl, vol. 20, pp. 325-6).

In view of the admissions made by Messrs. Martin and Tarbell, and of Mr. Towl's destructive criticism of their testimony, it is difficult to see how counsel for the petitioner could, with a straight face, argue that the testimony of the first-named gentleman has any bearing upon the issues raised here.

II. The Government also called C. C. Blackman, Superintendent of the Port Arthur refinery.

1. His testimony was entirely destroyed by the admission that he was testifying entirely from hearsay. On cross-examination he testified as follows (vol. 20, pp. 480-1) :

"Q. What have you to do with the management of pipe lines? A. Nothing at all.

Q. Where do you derive your information then as to the amount of mixture or the absence of mixture between the different grades of distillate that are sent through the line? A. *Well, it is just an opinion of mine; it is not founded on any absolute facts.*

Q. I see; it is what other people have told you, is it? A. Yes. * * *

Q. Do you take the gravities yourself? A. No, sir.

Q. And you have nothing whatsoever to do with the pipe lines? A. No.

Q. You do not take the gravity at the end where the oils are introduced into the pipe line? A. No.

Q. All the information you get is from others? A. Yes."

The witness's testimony was duly objected to as being incompetent and hearsay.

2. Irrespective of this objection, however, the witness testified to transportation of crude oil from Oklahoma through a single pipe by the Texas Company. It is in evidence that this company transports all the crude received by it for transportation as one kind and grade of crude without attempting any separation for differences in gravity. Its regulation in its

tariff in this respect is as follows (Deft. Ex. 221, vol. 19, p. 609) :

" 2. Crude petroleum will be received subject to the right and the consequences of mixing such and delivering such from common stocks only, the minimum gravity at any time of its reception for transportation to be 30 degrees Beaumé, the usual and proper methods of measurements to apply.'

Obviously, crude transportation under such a regulation presents no evidence which is material here.

3. Mr. Blackman (vol. 20, pp. 478-9) testified that his company transported through the same pipe crude oil and distillates of a high gravity by interposing between them several hundred barrels of water.

Whether any such method be employed in fact in the line consisting of a single pipe testified to by Mr. Blackman, the method would obviously be useless in a system like that of the defendant pipe line companies, where numerous parallel pipes are used. Under such conditions, a buffer of water would have to be introduced in each pipe, just as Mr. Vandergrift testified was done with the mechanical separators; then at the first junction point where one column of oil arrived sooner than another, the water buffer traveling in one pipe would inevitably mix completely with oil issuing from other pipes, so that thereafter not only would the buffer be lost, but most disastrous consequences would follow the mixture of the oil and the water. The suggestion is too puerile for serious consideration.

III. The rebuttal testimony just recited—and there is no other—obviously forms no answer to the proofs of the defendants upon the subject of contamination, and as to the commercial impracticability of transporting different kinds of crude for different owners through trunk pipe lines of the length and complexity of those operated by the defendant companies and under the conditions imposed by the oil business.

NINTH: The charge that the Standard Oil Companies have in the past sought to prevent competing pipe lines from doing business, and have hindered, obstructed and delayed the building of competing pipe lines and have bought stock in competing pipe lines for illegitimate purposes, is wholly unwarranted by the evidence.

1. *The payment of premiums:*

The Government seems to have substantially abandoned the charge that the defendants have paid exceptionally high prices for crude oil for the purpose of depriving competing pipe lines of their business. There is not the slightest evidence that the Standard Oil Company ever bought oil for any other purpose than to get the oil for its own use. No reason is suggested why the Standard Oil Companies in purchasing oil should not pay whatever amount they see fit that is necessary to obtain the oil they want to get. The charge of payment of premiums is in effect a charge that the Standard offering price in certain localities has been higher than in other localities. The proof of any such variation in the offering price is exceedingly meagre. Irwin testifies that his pipe line in Butler County in the early eighties started the practice of paying premiums on oil, *i. e.*, paying the producer a little more than the current market price. Local competition with Standard Oil buyers at one time ran the premium up to 25 cents a barrel (Irwin, vol. 6, p. 3021). No sinister motive on the part of the Standard Oil interests is to be detected here.

The contract with the Tidewater Oil Company whereby the Standard Oil Companies undertake to sell oil to the Tidewater Companies, fixes as the price of the oil the current market price including any premium the oil delivered may bear plus pipeage. Benson, called on behalf of the Goverment (vol. 1, p. 223) testifies that the Tidewater in the seventeen years between the time the contract was made and the date of his testimony had never been called upon to pay any premium. In explanation of the provision in the contract, he says (*id.*):

"It means the price over and above the Seep Agency price, or the general market price, as publicly quoted in certain districts. In certain districts the oil is supposed to be better and brings a higher price; but so far as we are concerned, we have never had any of the premium oil."

Todd, of the Cornplanter Oil Company (vol. 6, pp. 3212-3, 3327) tells a story to the effect that Mr. O'Day, of the National Transit Company, threatened to put the Cornplanter Company's pipe line out of business by means of premiums on crude oil, but according to Mr. Todd, the Cornplanter Company was in a position to disregard the threat and no attempt to carry it out was made.

Lee (vol. 6, pp. 3193-4-5) testifies that the Franklin Pipe Line Company arbitrarily paid from \$2.50 to \$4.00 a barrel for oil in the Franklin field while the price in other parts of the field was only \$1.25 per barrel. He says this condition continued for ten years. There was no pipe line in the field other than the National Transit, and the Franklin, both Standard Lines, and Mr. Lee suggests no explanation for the difference in price, other than the inherent depravity of the Standard Oil Companies. The Franklin Pipe Line Company was buying a special oil from a very limited pool for the use of the Galena and Signal Companies in making their peculiar brands of lubricating oil.

Mr. Emery is the only other witness for the Government to testify as to the payment of premiums. He built a pipe line into the Sartwell field near Bradford. In 1905 the Vacuum Oil Company came into the field and paid ten cents more a barrel than Emery was paying, and succeeded in obtaining part of the output of the field. In the Limestone field near Bradford Emery built a line into a district where the National Transit or the Vacuum was operating. The Vacuum paid a premium of ten cents a barrel over the price offered by Emery, which was the Seep Agency price. Emery did not choose to meet the price and the Vacuum got much of the oil (Emery, vol. 6, pp. 2667-8).

The Vacuum makes special kinds of lubricating oils, and is one of the very few Standard Companies that buy oil otherwise than through the Seep Agency. There is no suggestion in the record that the Vacuum paid the ten-cent premium

for any other reason than because it needed the oil in its business. The above is substantially all the evidence in the case as to the payment of premiums by the Standard Oil Company.

2. The suggestion that the Standard Oil Companies have obstructed the building of opposition pipe lines is not sustained by any evidence in the record.

(a) The Columbia Conduit Company was prevented for a time from crossing the Pennsylvania Railroad at the West Penn Junction (Emery, vol. 6, p. 2648). The line was built in 1874. The Standard Oil Company was not a shipper over the Pennsylvania Railroad until 1875 (Cassatt, vol. 20, p. 21). The pipe line was successful in crossing the right of way before it was purchased by the Standard Oil Company (Irwin, vol. 6, p. 3016).

(b) The Equitable Pipe Line was built in 1878. Its arrangements with the railroads were broken and it was sold to the Tidewater Pipe Line at that time probably the strongest competitor of the Standard Oil Co. (Emery, vol. 6, pp. 2649-2650).

(c) The Tidewater Pipe Line met with some opposition in securing its right of way (Warren, vol. 1, pp. 190-194). There is no evidence, however, in the record to connect the Standard Oil companies with the opposition to the construction of the Tidewater line.

(d) The United States Pipe Line had difficulty in crossing the right of way of the Erie Railroad and the Pennsylvania Railroad, and also found that rights of way and strips of land between it and its objective points were owned by parties who were unwilling to permit it to pass (Emery, vol. 6, pp. 2652-58). Emery testifies with great positiveness that the opposition to the construction of the United States Pipe Line was instigated by the Standard Oil companies. On cross examination, however, he proved himself wholly unable to make good his general assertions (Emery, vol. 6, pp. 2774-7). The interest of the Erie and Pennsylvania Railroads in preventing the construction of lines designed to divert traffic from their roads to other lines would seem sufficient to account for the opposition to the construction of the United States Pipe Line. The railroads in opposing the construction of the line acted within their legal rights, the position of the Pennsylvania Road being upheld by the Courts of New Jersey (Emery, vol. 6, p. 2658).

3. There is no proof that pipe lines or stocks, or interests, in pipe line companies, have been purchased, except for legitimate business reasons.

(a) A minority of the stock of the Tidewater Pipe Line, Ltd., was purchased in December, 1883, when the relations between the Tidewater companies and the Standard Oil Companies were perfectly amicable, and this stock has been held ever since solely as an investment (Pet. Ex. 257, vol. 7, p. 456; J. D. Archbold, vol. 17, p. p. 3326).

(b) The minority stock of the United States Pipe Line, about one-third of the whole, was purchased in 1895 (Def. Ex. 271 vol. 19, p. 633).

This stock has been held as an investment (J. D. Archbold, vol. 17, p. 3326). It cannot by any possibility give to the Standard Oil interests control of the Company, or any power to restrict its operations. The control of the United States Pipe Lines has long since passed into the hands of the Pure Oil Company, the stock of which Company, from its organization, has been held by a voting trust having no relations with the Standard (Tarbell, vol. 1, p. 474; *id.*, vol. 3, pp. 1436-7; J. D. Archbold, vol. 17, pp. 3327-8). The Standard Oil Company interests have also purchased at one time or another stock in the Producers' Pipe Line and in the Producers' & Refiners' Pipe Line, and now own a very small minority of the stock of each company (J. D. Archbold, vol. 17, pp. 3326-7; Def. Ex. 271, vol. 19, p. 633). They are both absolutely controlled by the Pure Oil Company. The imputation of an improper purpose in these purchases is gratuitous; and the same is true of cases like the Crescent Pipe Line where the entire line has been purchased. The Standard Oil Company has sufficient investments held merely as such and has built enough pipe lines on its own account to obviate the necessity of any explanation of the fact that it has invested in competing pipe lines and occasionally bought pipe lines outright.

The acquisition of the stock in the United States Pipe Line is associated by the Government with the purchase by the Standard Oil Company of certain refineries in the Oil Regions and with their relations to Herr Poth of Mannheim, Germany. The whole matter, though not strictly pertinent to the present discussion, may be conveniently disposed of at this point.

The United States Pipe Line reached the seaboard in 1893 (Tarbell, vol. 1, p. 469). It had two pipes, one for refined oil and one for crude oil. It was controlled by interests independent of and hostile to the Standard Oil Company. Herr Poth was a dealer in oil, with headquarters at Mannheim, Germany. He had long been buying his supplies from the Deutsche-Americanische Petroleum Gesellschaft, the company which marketed the Standard Oil product in Germany.

The Standard Oil interests were largely dependent upon him for a market for the distribution of petroleum products, in the district in which he dwelt. (J. D. Archbold, vol. 17, p. 3629). The United States Pipe Line entered into some arrangement with Herr Poth, as a result of which he ceased to market the products of the Standard Oil companies and brought his supplies from the United States Pipe Line and the refineries associated with it. The Standard Oil companies sought to hold their German market, and during the ensuing period of severe competition the price of export oil was very much reduced. A cause contributing to the decline in the price of export oil was the great increase in Russian production. (J. D. Archbold, vol. 17, p. 3631). The stocks of Pennsylvania crude oil were declining (J. D. Archbold, vol. 17, p. 3631) so that the price of crude did not fall proportionately to the decline in export oil. In 1905 Herr Poth made an overture to the D. A. P. G. looking to a re-establishment of his relations with them, and this overture resulted in a trade which made him again the customer of the D. A. P. G. (J. D. Archbold, vol. 17, p. 3630). The refiners had sent Mr. Lee to the Standard Oil Co. apparently for the purpose of making some arrangement to terminate competition. The Standard Oil Co. declined to make any such arrangement (Lee, vol. 6, pp. 3168-3169). Two or three committees were appointed by the refiners to negotiate with the Standard Oil interests, but no arrangement was effected (Lee, vol. 6, pp. 3169-3171). Two or three refiners at Titusville then sold their refineries to the Standard Oil Co. They were consolidated with the Eclipse works of the Atlantic Refining Co. at Franklin (J. D. Archbold, vol. 17, p. 3339). With their other assets the Standard acquired some of the stock of the United States Pipe Line Co.

CHAPTER V.

**ALLEGED CONTRACTS IN RESTRAINT
OF TRADE.**

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Alleged Contracts in Restraint of Trade.

In Chapter X. of the Petition, are set forth various transactions alleged to involve contracts in restraint of trade. The evidence concerning these transactions shows that they have no bearing on the charges made in the Petition.

(a) The first transaction, alleged to involve a contract in restraint of trade, is the participation by the Standard Oil interests in the Producers' movement of 1887 for the restriction of production (See Ex. 16, annexed to the Bill). The causes that stimulate every producer to bring to the surface all the oil he can get at without regard to market conditions have been stated in an earlier part of this brief (*ante*, pp. 91-3). The resulting tendency to overproduction has led to a number of movements on the part of the producers by contract among themselves, to check the drilling of new wells (Emery, vol. 6, pp. 2746 *et seq.*). In 1887 the crude oil above ground in Pennsylvania amounted to over 35,000,000 barrels. (Emery, vol. 6, p. 2739). The production of the Pennsylvania fields was far beyond the demands of the market. The situation resulted in another attempt by the producers, by an agreement among themselves, to stop the drilling of new wells. As to the participation by the Standard Oil companies in the agreement, Mr. Archbold says :

"Q. Do you remember now, generally speaking, what that shut-in movement of 1887 was; and if so, will you please tell us about it? A. The producers felt that the price of oil was at a nonproitable figure, and they asked us to join in an effort to enable them to so restrict their production for a period as to bring about a better condition of price, and we made the effort jointly with them, at their request, and its purpose was solely for the benefit of the producers of the oil and for the working class in the producing regions. It was so understood and so discussed—so stated at the time.

Q. What caused it to fail? A. The natural laws of trade caused it to fail.

Q. The impossibility of— A. Of restraining the individual producer in his operations." (Vol. 17, p. 3247).

The action of the Standard Oil Co. in the matter was extremely generous. The contract, Exhibit 16 attached to the Bill, evidences a donation by the Standard Oil Co. of the profits on 2,000,000 barrels of its own oil to be distributed by the producers among those connected with the production who were affected by the shut-in movement.

(b) The next transactions in which the Government discovers a disposition by contract with competitors to restrict their operations are the purchases by the Continental Oil Co. of all or the major part of the output of the United Oil Co. and the Florence Refining Co., at Florence, Colo. There is nothing whatever about these transactions to render them subject to criticism. There is a small producing field near Florence from which these two companies draw their supplies of crude oil. The Continental Oil Co. has marketing stations in Montana, Wyoming, Colorado, New Mexico, Utah and Idaho (H. M. Tilford, vol. 2, p. 729). It gets its supplies of oil from Whiting, Ind., and Sugar Creek, Mo., and buys most of the balance from the refineries at Florence. (*Tilford, id.*) It has no contract with the owners of these refineries but simply buys oil from them to meet the requirements of its business. It has been buying from the United Oil Co. for eighteen or twenty years, and for a great many years from the Florence Refining Co. (*id. 730*). The relations with the Colorado companies require no defense or explanation.

(c) The contracts made by the Standard Oil Co. (Iowa) and the Pacific Coast Oil Co. with the California companies have no possible relation to interstate trade or commerce. If a disposition to put restrictions on the operations of competitors, could be inferred from them, the inference would necessarily be limited to the intra-state trade of California. No such disposition is to be inferred. In the contract with the Puente Oil Co., dated March 31, 1898, the Standard Oil Co. (Iowa) agrees to purchase all of the Water White refined petroleum and all of the 67 degree deodorized naphtha manufactured by the Puente Oil Co. at its refinery at Cheno, near Los Angeles, and also all of the 58 degree deodorized naphtha that it could use in its Los Angeles business. The obligation of the Standard Oil Co. (Iowa) to take all of the Water White

and 67 degree naphtha produced at the Cheno refinery was limited to 600,000 gallons a year of the one and 360,000 gallons of the other. The Puente Co. bound itself not to deal in the products mentioned except those of its own manufacture. The contract was for a period of two years. Mr. H. M. Tilford says in reference to this contract :

“ There was a certain trade we expected to supply down in that section, and we anticipated supplying them with this oil of theirs and eastern oil.” (vol. 2, p. 735.)

The other contracts in California are all subsequent to 1899.

The Bill alleges a contract of February 4, 1904, between the Pacific Coast Oil Co. and the Union Oil Co., whereby the Union Oil Co. agreed not to manufacture any illuminating oil, naphtha, benzine, gasoline or light distillate. (Bill, p. 106.) This allegation is denied in the answer. (Answer of Standard Oil Co. (New Jersey), p. 26.) It is proved that at one time there was a contract between the Union Oil Co. and the Pacific Coast Oil Co.; that it commenced in 1904 or 1905 (H. M. Tilford, vol. 2, p. 735); and that under this contract the Pacific Coast Oil Co. bought crude oil and some refined oil or distillate from the Union Oil Co. (*id.*, p. 736). The original contracts were destroyed in the fire at San Francisco. (Tilford, vol. 17, p. 3526.) The alleged copy of the contract offered in evidence on behalf of the Government, Petitioner's Exhibit 944 (vol. 21, p. 101), has not been proved. (H. M. Tilford, vol. 17, pp. 3510, 3516-3517.) This alleged contract was for a period of two years. The Pacific Coast Oil Co. agreed to purchase from the Union Oil Co. 600,000 barrels of crude oil a year, it being provided, however, that the Union Oil Co. might deliver petroleum distillate not exceeding 10,000 barrels per month in lieu of crude oil. The Union Oil Co. was not obliged to deliver crude oil, except to the extent that such oil was produced from specified oil producing properties. During the term of the contract the Union Oil Co. was not to manufacture or sell in the County of Contra Costa refined oil, naphtha and the other lighter products of petroleum.

The contracts with the Puente Oil Co. and the Union Oil Co. are the only contracts with California refining companies of which

there is any evidence in the record. It is not shown that there was any contract with the Union Oil Co. prior to the contract of 1904 (H. M. Tilford, vol. 17, p. 3510); nor that the Union Oil Co. ceased making refined oil during the continuance of the contract (*id.* p. 3525). Since the expiration of the contract it has been making and selling refined oil (*id.*). The Puente Oil Co. since the expiration of the contract with it has been in active competition with the Standard Oil Co. (California) (H. M. Tilford, vol. 17, p. 3522). There were many refineries in California besides those of the Union Oil Co. and the Puente Oil Co. (H. M. Tilford, vol. 17, p. 3508). The Union Oil Co. itself had a refinery outside of Contra Costa County, at Bakersfield (H. M. Tilford, vol. 17, p. 3511).

The Government cites contracts of the Pacific Coast Oil Co. with the Standard Oil Co. (California) for the purchase of crude oil as evidence of an intent to prevent other refiners from obtaining crude oil. The present production of crude oil in California is from 135,000 to 140,000 barrels per day. One-half of this crude oil is refinable, and of the refinable oil the Standard Oil Co. (California) takes about 25,000 barrels per day (H. M. Tilford, Vol. 17, p. 3518). The features of the crude oil contracts which are alleged to be restrictive are in fact proper and reasonable provisions for assuring to the purchaser a fulfillment by the seller of his contract. The contracts themselves were destroyed in the California fire (H. M. Tilford, Vol. 17, p. 3526). Mr. H. M. Tilford testifies to their purport and effect as follows :

" Q. Mr. Tilford, on page 107 of the bill it is alleged, among other things, that the Pacific Coast Oil Company entered into certain contracts with certain other California producers, by which contracts the producers agreed to sell exclusively to the Pacific Coast Oil Company and to limit their production—the exact persons and producers with whom such contracts have been made the petitioner being unable to state; and the bill then avers specifically the making of certain contracts, particularly with the Pinal Oil Company, I think. Now, what was there to those contracts, so far as any limitation on production was concerned, if you remember that feature of those producing contracts? A. While I do not remember the details of all the contracts, I know that there was a

stipulation in some of them that the contract provided for the furnishing of a specific amount of oil from a special piece of ground in a given period of time, and the producer was not to sell any oil produced on that special piece of ground to anyone else until he had stored above ground a sufficient quantity to fulfill his contract with either the Pacific Coast Oil Company or the Standard Oil Company of California.

Q. Did that same producer have other producing lands ? A. I understood that some of them did have other lands.

Q. And what was the purpose of that sort of a limitation ? A. To make sure that if the oil was produced from that particular land we would get it according to our contracts, we having made other contracts with consumers of oil, and we needed it at the refinery, too.

Q. That is, you made a contract for a specific minimum amount with the producer from a given piece of land, and in connection with the making of that contract and in order to insure its being carried out, you further provided for the storage of oil from that particular piece of ground in order to enable the producer to fulfill fully the terms of that contract ? A. Storage up to the undelivered portion of the contract due the S. O. Company. If they produced anything in addition to what was due the Pacific Coast Oil Company or the Standard Oil Company, they were at liberty to dispose of it wherever they saw fit." (Vol. 17, pp. 3525-3526.)

CHAPTER VI.

COMPETITORS.

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Competitors.

The Standard Oil Companies have at all times had competitors in all branches of the business, and new competitors have constantly appeared in the field. Collectively, their business has grown and is growing faster than that of the Standard Oil Companies. Many of them are very prosperous.

(1) Some men have always been willing to encounter the hazards incident to an oil business conducted on any but a very extensive scale ; and some have had sufficient capital and provided themselves with sufficient facilities to insure a certain degree of permanence. Oil refineries have sprung up in every field that has been discovered, and many have continued in operation long after the waning of the field has cut down the profits. Many refiners have constructed local systems of pipe lines by which they are enabled to gather oil over a considerable area. A few, like the Tidewater, the Pure Oil Co., the Gulf Refining Co. and the Texas Refining Co., have extensive systems of gathering lines and trunk lines, by which they reach one or other of the great interior fields and bring the oil to seaboard. Some of the refining companies have established a number of refineries at different points. A considerable number have established their own marketing stations in this country, and a few have introduced their marketing system into foreign countries.

(2) Three refineries at Cleveland were not purchased by the Standard Oil Co., but continued in operation a long time. (Emery, vol. 6, p. 2625.) There have always been competitive refineries at Cleveland. (J. D. Rockefeller, vol. 16, p. 3139 ; Castle, vol. 6, pp. 3061-3162 ; Teagle, vol. 3, p. 1467 ; Def. Ex. 277, vol. 19, p. 662.) The same is true of Pittsburg. (Reighard, vol. 6, pp. 3131-3136 ; Irwin, vol. 6, p. 3015 ; Emery, vol. 6, p. 2642 ; Willock, vol. 5, p. 2542 ; Def. Ex. 277, vol. 19, p. 662.) It is also true of Philadelphia (Cassatt, vol. 20, p. 31 ; Emery, vol. 6, pp. 2642, 2797, 2800 ; Def. Ex. 277, vol. 19, p. 662) On New York Harbor the

Edgewater Oil Co., owned by John Ellis & Co., is the oldest refinery in the United States now in operation. (Emery, vol. 6, p. 2705; J. D. Archbold, vol. 17, p. 3446). The firm of Lombard, Stevens & Co., succeeded by Lombard & Ayres and then by the corporation of Lombard, Ayres & Co., have carried on a refinery business on New York Harbor continuously since 1869. (Lombard, vol. 1, pp. 243-244, 261). There can be no question as to the fact that between 1874 and the Tidewater Agreements of 1883 (Exhibit 13 annexed to the Bill) Lombard & Ayres and Lombard, Ayres & Co. were active and aggressive competitors of the Standard Oil companies. (Lombard, vol. 1, p. 260). They were part of a group of independent refiners. (Lombard, vol. 1, p. 252). In 1878 or 1879 the members of the firm of Lombard & Ayres, and the other independent refiners organized The Ocean Oil Co., the Chester Oil Co., and Lombard, Ayres & Co., and constructed refineries at Bayonne and at Chester, Pennsylvania. (Lombard, vol. 1, p. 259). The Tidewater Pipe Co., with which they were associated, had already constructed its pipe line as far as Williamsport, on the way to seaboard. (Lombard, vol. 1, p. 258). In 1883 these three refining companies were apparently doing about one-eighth as much business as all of the Standard Oil companies were doing. (Exhibit 13 annexed to the Bill).

If there was ever a time when there were no refineries in the oil regions aside from the Standard Oil Co., the period was very brief. Emery, Logan & Weaver, who began business in 1879, were exporters of the oil of independent refiners located both in Pittsburg and the oil regions. (Emery, vol. 6, p. 2642.)

(3) Many of the independent refineries of today, besides the Riverside and Tidewater refineries, have been in operation a great many years. The present refinery of the Waverly Oil Works at Pittsburg was built in 1880. (Willock, vol. 5, p. 2542.) Miller's refinery at Allegheny, Pa., apparently dates from the early seventies. (Irwin, vol. 6, p. 3015.) The American Oil Works at Titusville have been in active operation for about twenty years. (Westgate, vol. 6, p. 2840.) The Cornplanter Works at Warren have been in operation over twenty years. (Todd, vol. 6, p. 3207.) The National Refining Co. at Cleveland was in operation in 1885. (Castle, vol. 6, p. 3061.) The Crew-Levick Co. claims that its business was established

in 1862. (Wolff, vol. 20, pp. 106-107.) Their works at Chester have been in operation a great many years. (Emery, vol. 6, p. 2634.) Emery's refinery at Bradford dates from 1889. (Emery, vol. 6, p. 2651.) The Columbia Oil Company's works at Bayonne were built in 1889.

(4) In 1895 a great many of the refineries still operated in competition with the Standard Oil interests were in active business, and their aggregate capacity was very large; in the oil regions of Pennsylvania the Emery Manufacturing Co., the Germania Refining Co., the Continental, the Crystal, the Independent, the Penn and the Empire, all of fair size (Emery, vol. 6, p. 2691); the Crew-Levick, the Cornplanter, the Cone-wango, the Canfield Oil Works, the Seneca Oil Works, the Emlenton Refining Co., Titusville Oil Works, the American Oil Works, Tiona Oil Works, Levi Smith, the Glade Oil Works, and the Warren Refining Co.; at Pittsburg and in its vicinity the Waverly Oil Works, and Miller & Sons, the Island Petroleum Co., West Pittsburg Refining Co. and the Freedom Oil Works (Emery, vol. 6, pp. 2691, 2697-2704); at Philadelphia the Crew-Levick Co.; on New York Harbor the Edgewater Oil Works, and the Columbia Oil Co., besides the Tidewater Works; at Wellsville, New York, the Wellsville Refining Co.; in Ohio the Cleveland Refining Co., the National Refining Co. with refineries at Cleveland, Findlay and Marietta, the Paragon at Toledo, the Sun Oil Co. and the Craig Oil Co. also at Toledo (Emery, vol. 6, pp. 2704-2709).

(5) Since 1895, the capacities of the outside refineries that were then in operation have increased on the average 25 per cent, (Emery, vol. 6, p. 2700). In 1896, the Standard Oil Companies sold to the refiners of Western Pennsylvania 302,000 barrels of crude oil; in 1903, 1,750,000 barrels (W. H. Tilford, vol. 1, pp. 173-6). In the first half of 1907 they bought 825,845 barrels of crude oil (W. H. Tilford, vol. 20, pp. 457-8). The increase in the purchases of crude oil from the Standard companies was, of course, in great measure due to the decline of the Pennsylvania fields; but in part was due to the increase in capacity testified to by Mr. Emery. In the last eight or ten years many substantial refineries have been built. Ellis & Co., the owners of the Riverside Oil Works at New York, have constructed, under the name of the Valvoline Refining Co., works

at Butler, Pennsylvania. (Emery, vol. 6, p. 2703.) The Pure Oil Co. has built a large plant at Marcus Hook. (Emery, vol. 6, p. 2704) The Sunlight Oil Co. has established a great plant at Marcus Hook for obtaining fuel oil from Texas crude. (Payne, vol. 1, p. 355). There are today in Pennsylvania, New York, New Jersey and Ohio, fifty-five separate refining plants besides those owned by the Standard Oil companies and the Tidewater companies. Refineries have been erected in and near every oil field that has been discovered. In Kansas and Oklahoma there are today twenty-five refineries not connected with the Standard Oil Co. (Def. Ex. 277, vol. 19, p. 662.) Already in and near the Southern Illinois field there are four refineries. (*id.*). The fields in Kentucky and the little fields in Colorado and Wyoming have led to the establishment of refineries for the utilization of their output. (*id.*). Thirteen refineries are in operation in Texas besides the Security Oil Co. and the Corsicana; and three in Louisiana. (*id.*). The three great plants of the Texas Oil Co. and the Gulf Refining Co. at Port Arthur are among the largest in the United States. (Emery, vol. 6, pp. 2710-2711.) There have been refining plants in California making illuminating oil of an inferior grade for many years. The great increase in the production of California crude has occurred since 1900, and there are now in California twenty-two plants besides that of the Standard Oil Co. for the utilization of the crude. (Def. Ex. 277, vol. 19, p. 662.)

(6) Many of the independent refiners have profited by the experience of the Standard Oil Co. and adopted on a smaller and less effective scale some of the distinctive features of its policy. Several have sought at once to simplify the problem of obtaining crude oil, and the problem of distributing their products by building or purchasing refineries at different points drawing their supplies from different fields and adapted to supply different markets at a minimum cost of transportation. The National Refining Co. has plants at Marcus Hook, Pennsylvania, Marietta, Cleveland and Findlay, Ohio, and at Coffeyville, Kansas; the Crew-Levick has refineries at Marcus Hook, and at Warren, and at Struthers, Pennsylvania; Ellis & Co. have refineries on New York Harbor and at Butler, Pennsylvania; the Cornplanter Refining Co. has established a refinery in the Illinois field (Def. Ex. 277, vol. 19, p. 662). Most of the

stronger refining companies have established their own gathering systems ; *e. g.*, in Pennsylvania John Ellis & Co., the Cornplanter Refining Co., Crew-Levick & Co. (Muir Oil Co.), the Emery Manufacturing Co.; in Ohio the Paragon Refining Co., the Sun Line Oil Co., the National Refining Co. (Payne, vol. 1, pp. 369-370 : Emery, vol. 6, p. 2769 : Todd, vol. 6, p. 3211). Several own or control, or are associated with, systems of trunk lines that reach from the Seaboard into one or other of the interior oil fields where they are connected with extensive systems of gathering lines. Of these the most notable are the Pure Oil Co. and the group of refiners associated with it. The Pure Oil Co. is a very striking instance of the successful development of a great business competing directly with the Standard Oil Companies, in the localities where they have been longest established, and in departments of trade in which they have taken peculiar interest. An account of the development and present scope of its business will be given in a subsequent paragraph. The Gulf Refining Co. and the Texas Refining Co. have not been content to rely on the Texas fields in the neighborhood of Port Arthur, where their refineries are located. Each of them has a trunk line to Port Arthur from the mid-continent fields, and systems of gathering lines which will insure them a supply of crude oil as long as the Oklahoma and Kansas fields continue to produce. These two companies are examples of enterprises undertaken with a fair appreciation of the character of the business, and the need of abundant capital and great expenditures to insure its success. (Emery, vol. 6, pp. 2710-2711 ; Litchfield, vol. 16, pp. 2658-2659, 2682-2683).

Independent refiners had begun to establish marketing stations of their own at least as early as 1885. In 1885 Holdship & Irwin had marketing stations at Davenport, at Joilet and at Memphis, and shipped a great deal of oil to Chicago. (Irwin, vol. 6, p. 3022). The companies now in operation have marketing stations wherever they seek local trade, and many have subsidiary marketing companies : *e. g.*, the Cornplanter Refining Co. has stations as far West as St. Paul, where it has been established for fifteen or sixteen years (Todd, vol. 6, pp. 3213, 3227). It owned a subsidiary marketing company in New England (Todd, vol. 6, p. 3228). It has stock in a Canadian marketing and refining company with headquarters at Toronto,

which has absorbed other marketing companies owned by the Cornplanter doing business over a great part of Canada. It has local marketing companies at Scranton, Pa., and at Easton, Pa. (Todd, vol. 6, p. 3233). The National Refining Co. does its local marketing business at Cleveland through the Atlas Oil Co. and the Globe Oil Co.; the Columbia Refining Co. through the Commercial Oil Co. and the Studley Refining Co. (Squire, vol. 13, p. 1569). In Ohio forty different refiners compete for the marketing business with the Standard Oil companies, and fifteen of them maintain tank stations for the distribution of oil in bulk. (Def. Ex. 103, vol. 18, p. 270). The Crew-Levick Co. claims to have tank wagon stations for the distribution of illuminating oil in Philadelphia, New York, Brooklyn, Jersey City, Baltimore, Chicago, Chester, Camden, West Chester, Pa., Mt. Holly, N. J., Warren, Pa., Newark, N. J.; Lancaster, Pa., Trenton, N. J., Dover, Del., Reading, Pa., Downington, Pa., and Wilmington, Del. (Wolff, vol. 20, p. 108) The Pure Oil Co. has one of the most important of the marketing systems competing with the Standard Oil companies. It will be described in connection with the description of that Company. In that part of the Brief in which the charges of unfair competition are treated, many instances will be met of local marketing stations operated by or for various of the independent refiners.

The Company that has gone furthest in adopting the system of the Standard Oil Co. in the export trade is the Pure Oil Co. Many refiners are associated with the Pure Oil Co. and employ it as their marketing agency abroad. The Cornplanter has engaged extensively in the marketing business in Canada (*supra*); the Crew-Levick Co. claims to have branch offices at Liverpool, London, Paris, Lyons, Hamburg, Calcutta, Tokio, Yokohama and Kobe (Wolff, vol. 20, p. 108). It undoubtedly does an extensive export trade. Nearly one-fifth of the output of the Tidewater Oil Co. is sold for export to South America, Africa and the West Indies (Benson, vol. 1, p. 219), in direct competition with the exports of the Standard Oil Co. The Texas Oil Co. and the Gulf Refining Co. are exporters (W. H. Tilford, vol. 1, p. 184). The Union Petroleum Co., of Philadelphia, is also a purchaser of oil for export (Todd, vol. 6, p. 3211). Even the small Waverly Oil Works at Pittsburg does some direct export business (Willock, vol. 5, p. 2535).

The independent refiners have gone into the lubricating business extensively and their products are sold everywhere in competition with those of the Standard. John W. Duling, salesman of the Standard Oil Co. in Virginia (vol. 13, pp. 1312-1314), names the following competitors of the Standard Oil Co. engaged in selling lubricating oils in the southern field: W. C. Robinson's Sons Co., of Baltimore; the Crown Oil and Wax Works of Baltimore; the Red "C" Oil Co. of Baltimore; the Union Petroleum Co. of Philadelphia; the Gulf Refining Co. of Philadelphia; the Valvolene Oil Co. (or Leonard & Ellis) of Philadelphia; the Commercial Oil Co. of Cleveland; the Lincoln Oil Co. of Cleveland; the Havemeyer Oil Co. of New York; Harwood Bros. of Richmond, Va.; Fairfax Refining Co. of Cleveland; the Wolverine Oil Co. of Cincinnati; the Independent Oil Co. of Mansfield, Ohio; the Pioneer Oil Co. of Cleveland; Bolton Oil Co. of Cleveland; and the Empire Oil Co. of Cleveland; J. E. Farrar, a salesman of the Standard Oil Co. in North Carolina (vol. 13, p. 1445), names as competitors of the Standard Oil Co. engaged in the sale of lubricating oils, the following: Leonard & Ellis of Philadelphia; A. W. Harris & Co. of Providence, R. I.; W. C. Robinson & Son of Baltimore; Harwood Bros. of Richmond; North Carolina Oil Co. of High Point; The Valley Lard Oil Co. of Cleveland; Studley Refining Co. of Cleveland; the Crown Oil Co.; and L. C. Carran Co. R. P. Fair, salesman of the Standard Oil Co., Greenville, S. C. (vol. 13, p. 1402), names as competitors of the Standard Oil Co. engaged in the sale of lubricating oil, the following: The Petroleum Oil Co. of Anderson, S. C. (p. 1403); and the Johns Hopkins Oil Co. of Baltimore.

(7) The facilities for the transportation of shipments of competitors of the Standard are ample. The Standard Oil Companies own 10211 tank-cars for the transportation of oil in bulk. The tank-cars not owned by the Standard Companies number 10594. (Def. Ex. 108, vol. 18, p. 274).

(8) The competitors of the Standard in fact ship and sell oil in every part of the United States in competition with the Standard Oil Companies. The reports from the marketing stations of the Standard Oil Companies, which are made one of the great features of the Government's case, show that in every district in the Country where the Standard sells, their agents find that oil is being purchased from their com-

petitors. The Waverly Oil Works may be cited as an instance of a small refinery that does not find itself restricted in disposing of its products. Mr. Willock testifies that it sells practically all over the Country, wherever it can find a market. (Willock, vol. 5, p. 2535).

(9) The competitors of the Standard Oil Co. in the aggregate have not only held their own trade and obtained their full proportion of increase in the total volume of trade, but they have increased and are increasing their proportion of the whole. Between 1897 and 1906, the sales of illuminating oil in the major marketing divisions of the United States, Canada and the West Indies, in competition with the oils of the Standard Oil Companies, have increased from 11.1 percent to 15.2 percent; competitive sales of naphtha have increased from 8.8 percent to 13.9 percent. Between 1900 and 1906 the exports of illuminating oil by the Standard Oil Companies have decreased from 90.8 percent to 86.3 percent. (Pet. Ex. 388, 389, 377, vol. 8, pp. 918, 919, 904).

(10) The competitors who have continued to face and have survived the hazards of the business have been very successful. The success of the Pure Oil Co. is the most notable particular instance; but all the instances of which there is any record in the case show that the refining of petroleum, where chances have been favorable, has generally yielded the large profits naturally to be expected in view of its hazardous character. The total investment of the Waverly Oil Co. was carried on the books in 1895 at \$175,646.63. In July, 1902, the book value was over \$425,000, and in 1905 over \$717,000. (Willock, vol. 5, p. 2545). The original investment in the American Oil Works in 1888 was \$10,000. The present capital is \$450,000. (Todd, vol. 6, p. 3221). The Emery Manufacturing Co. started in 1889 purchasing a little refinery for \$5,000. The value of its refining plant is now from \$350,000. to \$400,000., and the investment in gathering lines is about \$200,000. (Emery, vol. 6, pp. 2769-2770). In the first year the business was \$15,000. or \$20,000. It is now from \$30,000. to \$50,000. a month. (*id.*). The new Kansas refineries are successful (Litchfield, vol. 16, p. 2681). The Indian Refinery in Kentucky is, in the words of Mr. Emery, "after the Standard" (Emery, vol. 6, p. 2711). All the evidence indicates that apart from the hazards peculiar to it, the business is a very prosperous one.

(11) The Pure Oil Co. affords the most striking instance of the activity of the Standard's competitors. About 1887 a secret association was formed among the producers in the Pennsylvania oil fields, one of the objects of which was to limit the production of crude oil. The shut-down movement was of short duration, but the association continued active for a number of years. In 1891 some of the men who had been connected with this association organized the Producers' Oil Co. Ltd. This Company had a capital of \$600,000. and built a pipe line from the McDonald field to Coraopolis, on the Ohio River, southwest of Pittsburg. This was a gathering system, Coraopolis being only about six miles from the McDonald field. The Company had some tank-cars and tanks at Coraopolis, and did a small amount of business in fuel oil. The Producers' & Refiners' Oil Co. was organized in 1892, with a capital of \$250,000., part of which was taken by the Producers Oil Co. and the balance by refiners at Oil City and Titusville. It constructed a pipe line 92 miles long, from Coraopolis to Titusville, leased the plant of the Producers' Oil Co. and constructed a gathering system in the Butler field north of Pittsburg. (Tarbell, vol. 3, pp. 1430-1432.) The system was completed in 1893 and delivered oil to nine refineries at Oil City and Titusville that were interested in it. The same interests, and others, had organized the United States Pipe Line in 1892. One of the stockholders was the Producers' Oil Co. Lewis Emery, Jr., and others interested in the Columbia Oil Co. at Bayonne, N. J., were also among the stockholders. The United States Pipe Line constructed first a pipe line for refined oil, from Oil City to Wilkesbarre, and a crude oil line from Bradford to the same point. The crude oil fields in Elk County were reached by a line from Bradford. The lines to Wilkesbarre were 250 or 300 miles long, and at Wilkesbarre connected with the Jersey Central. The lines were completed in 1893. The Columbia Oil Co., at Bayonne, was supplied with crude oil by the pipe line and the Jersey Central. This Company also provided oil terminals and handled the refined oil of the oil region refiners sent forward through the refined oil pipe. (*id.* 1434.) The United States Pipe Line group in 1892 or 1893 succeeded in inducing Herr Poth, a large dealer in oil in Germany, to take their oil instead of purchasing his supplies from the Standard Oil Companies, as he had theretofore done.

This at once gave them a foothold in Germany and made a serious inroad in the Standard Export Trade (J. D. Archbold, vol. 17, pp. 3629-3630.) Herr Poth finally returned to the Standard Companies but the foothold gained in the German trade has never been lost.

The Pure Oil Co. was organized in 1895 by the same interests that had organized the other companies. Its authorized capital was at first one million dollars. The controlling interest in its stock from the time of its organization until the present time has been held by a voting trust in the interest of the original United States Pipe Line group. Until 1900 it was exclusively a marketing company. In 1896 it established marketing stations in New York and Philadelphia and stations in Europe. It handled the export oil and at least part of the domestic oil of the Columbia Oil Company, and the oil region refiners who took their crude oil from the United States Pipe Line. In 1905 its capital stock was increased to \$10,000,000. and it acquired most of the stock of the Producers' Oil Co. and the Producers' & Refiners' Oil Co., and 52 per cent. of the stock of the United States Pipe Line, practically issuing its own stock in exchange therefor. (Tarbell, vol. 3, pp. 1435-1438). In 1901 and 1902 the refined and the crude oil lines of the United States Pipe Line were extended to Marcus Hook, at the mouth of the Delaware. For a number of years they had terminated at Freemansburg, on the Jersey Central, and the oil had gone forward by rail to Bayonne. (*id.* 1435). In 1903 the Pure Oil Co. began the erection of a refinery at Marcus Hook, which was completed in 1904 or 1905, and has since been a large refining as well as a marketing company. (*id.* 1438). It has itself constructed an extensive gathering system in West Virginia, connecting at Coraopolis with the lines of the Producers' & Refiners' Oil Co., Ltd. This line has been extended into the fields of Southeastern Ohio, and is leased to and operated by the Producers' & Refiners' Oil Co. (*id.* 1438-1439). A trunk line directly to Marcus Hook, from the fields where the gathering lines are located, has just been constructed by the Pure Oil Pipe Co., organized by the Pure Oil Co. to obtain the power of eminent domain, and owned entirely by the Pure Oil Co. (*id.* 1439). The Pure Oil Co. directly owns producing properties both in the eastern fields and

in Illinois. It also owns 60 per cent. of the Pure Oil Producing Co., which operates in the eastern fields and has organized a Pure Oil Operating Co. to operate in Illinois ; it also owns the stock of the Quaker Producing Co. in the Mid-continent field. It is looking forward to extending its pipe line system to the western fields (*id.* 1440-1441). It owns through the Penn-Oil Steamship Co. a tank steamer used for transporting oil in bulk to Europe, and constantly engaged in that service. It has tank stations and tanks for receiving and distributing oil at Hamburg, Rotterdam, Amsterdam, Mannheim, Riesa, Stettin, Dusseldorf, Lubeck, and many smaller places in Germany and Holland. It has barges on the Elbe and twenty or twenty-one for use on the canals of Holland. It distributes also extensively by tank-cars. It sells its products also extensively in Belgium and Switzerland. It has contracts in France, England and the Scandinavian Countries under which it supplies oil to dealers in those Countries, through whom the oil is marketed (*id.* 1442-1443).

The foreign marketing business has steadily grown since the organization of the Company (*id.*). In the United States the Pure Oil Co. has marketing stations in Brooklyn, Harlem and Yonkers, and distributes oil throughout New York City : also at Wilmington, Bethlehem, Wilkesbarre, Newark, at Jacksonville, Mobile and Pensacola. It distributes from these points, and makes tank-car shipments to Baltimore and New England, and also to other points (*id.* 1444). It makes lubricating oils which it sells extensively through jobbers (*id.* 1445). The Emery Manufacturing Co., of Bradford, the Penn Refining Co. and the Independent Refining Co. of Oil City, are represented on the voting trust that controls the Pure Oil Co. (*id.* 1446). These refineries and also the Empire Oil Works, the Crystal Oil Works, the Continental Refining Co., the Germania Refining Co., The American Oil Works and the Titusville Oil Works, all originally took stock in the enterprises that are now the Pure Oil Co., and have been associated in the development of the business from the beginning. They take their crude oil from the Pure Oil Co. Pipe Lines, and it handles all of their export oil (*id.* 1447). The Pure Oil Co. and the associated refineries are applying on quite an extensive scale some of the principles essential to permanent prosperity in the petroleum business.

(12) In foreign countries the Standard Oil companies meet with competition from the oils of Russia, Roumania, Galicia, Sumatra, Burmah and other countries. A partial list of the corporations and firms, exclusive of those engaged in business in the United States competing with the Standard Oil companies in the markets of the world, shows a total of over 400. The capital of 147 of these organizations amounts in the aggregate to two hundred and seventy-five million dollars (J. D. Archbold, vol. 17, p. 3286: Def. Ex. 275, vol. 19, pp. 654-659).

